

Using Technology to Enhance Nursing Care Delivery

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INNOVATIVE
PATIENT CARE



*The skill to heal. The spirit to care.**

Learning Objectives

- The learner will be able to:

Define RTLS & RFID technology

List two benefits of RTLS & RFID technology in healthcare

Identify two patient safety improvements associated with RTLS & RFID technology

Who is Florida Hospital?

- Founded in 1908 by Adventist Church
 - To extend the healing ministry of Christ*
- Seven campuses; Licensed for 2,300 beds
- Market leader in Central Florida
- Most Wired Award Recipient
- HIMSS Level 6



Who is Celebration Health

- Built 1996, SW Orlando Market
- Chosen to be the health location for the
- “EPCOT” Celebration Community Plan
- Continuous growth:
- 174 beds
- 75K+ ED Visits
- High tourist traffic
- 13,000 + Surgical & Endo
- Leading robotic surgery site
- 15,000 surgeons trained annually on robotic and innovative surgical techniques



What is RFID & RTLS Technology

- Radio Frequency Identification Devices
- Real Time Location Systems

Indiana University-Purdue Study

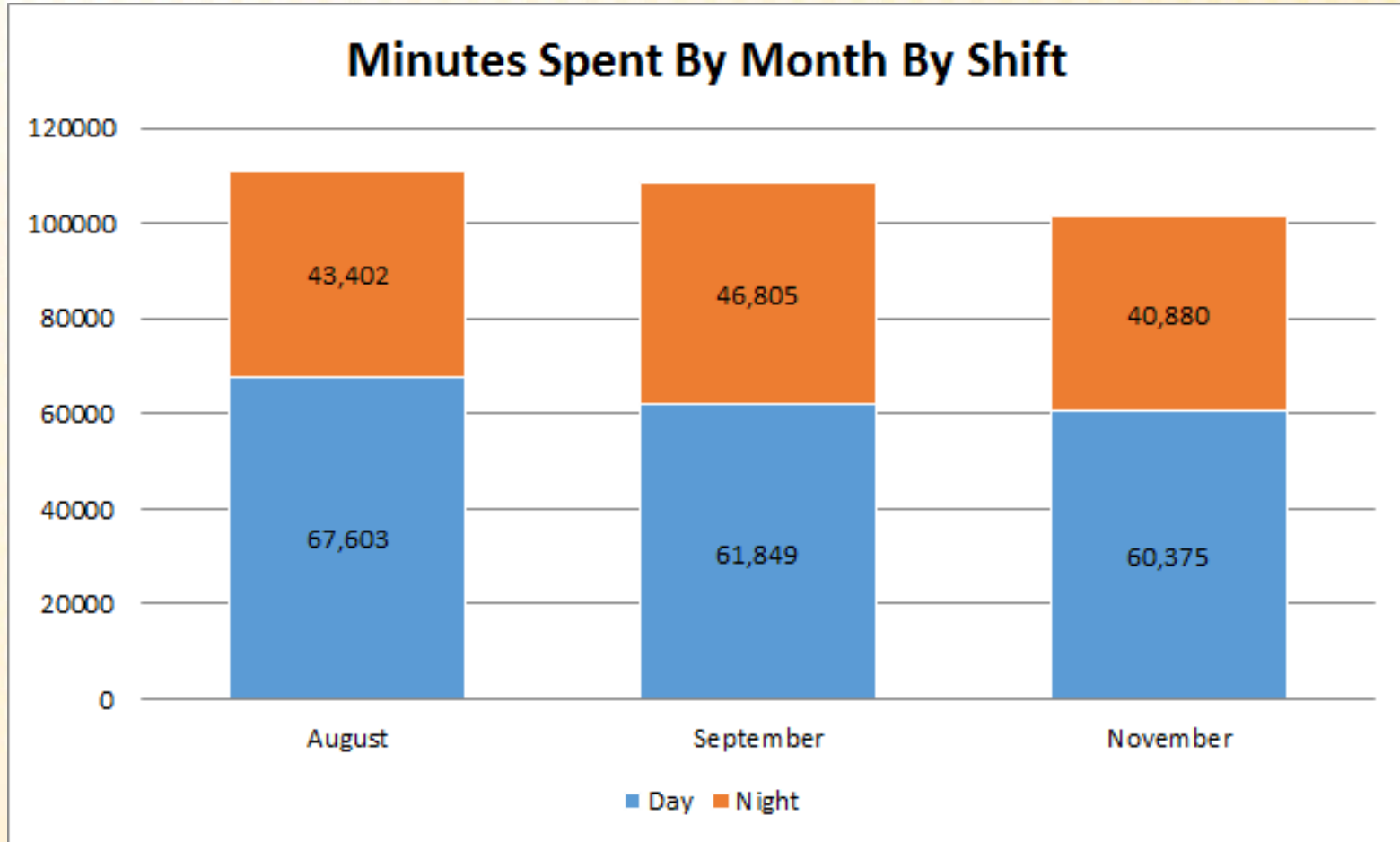
- In-direct cost savings \$750,000
- Nursing time 60mins per shift

Wicklund, 2009

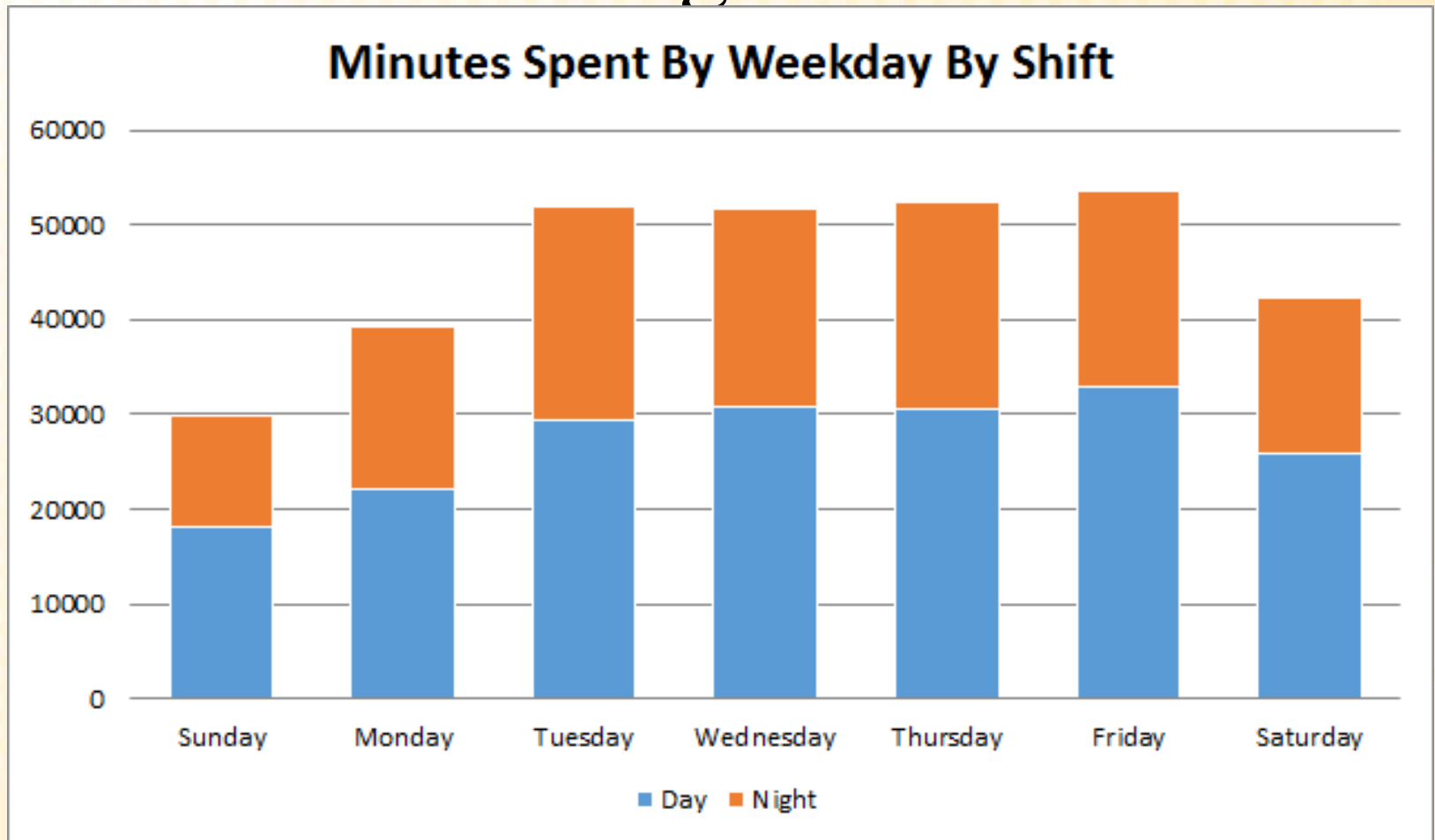
Enhancing Nursing Care

- Nursing Ratios
- Nursing Assignments
- Process Validation
- Improved HCAHPS
- Nursing Efficiency

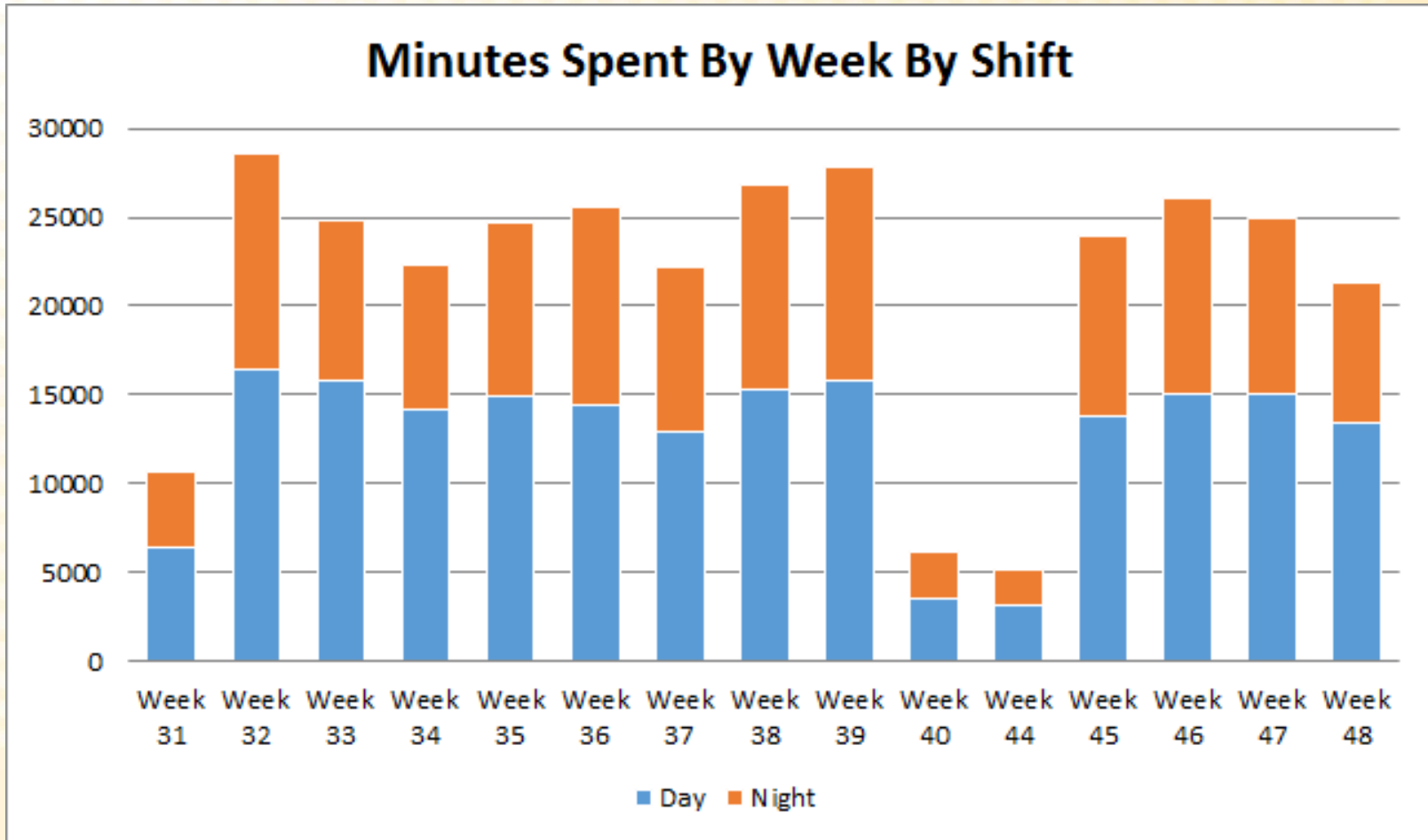
Nursing Ratios



Nursing Ratios



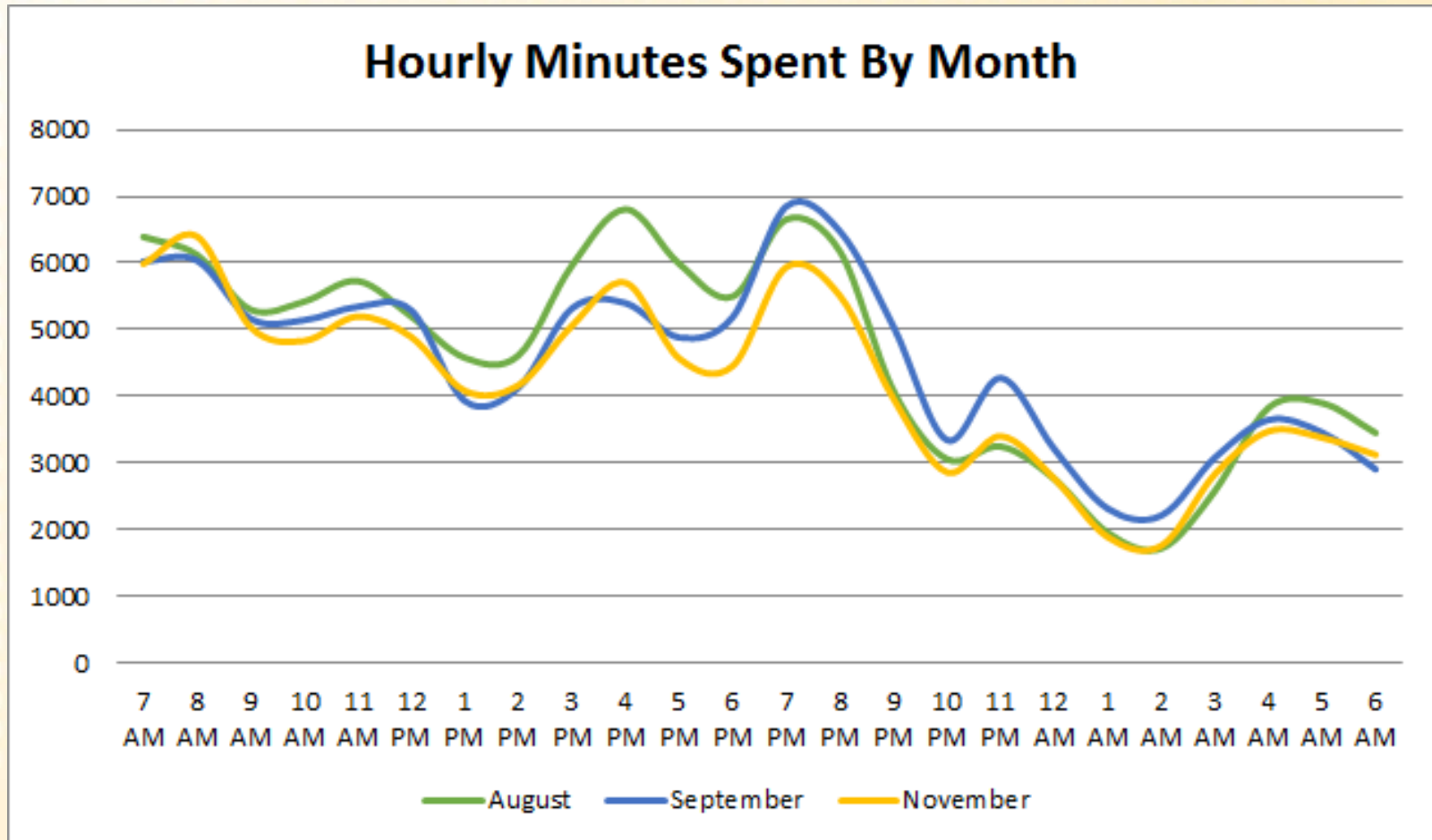
Nursing Ratios



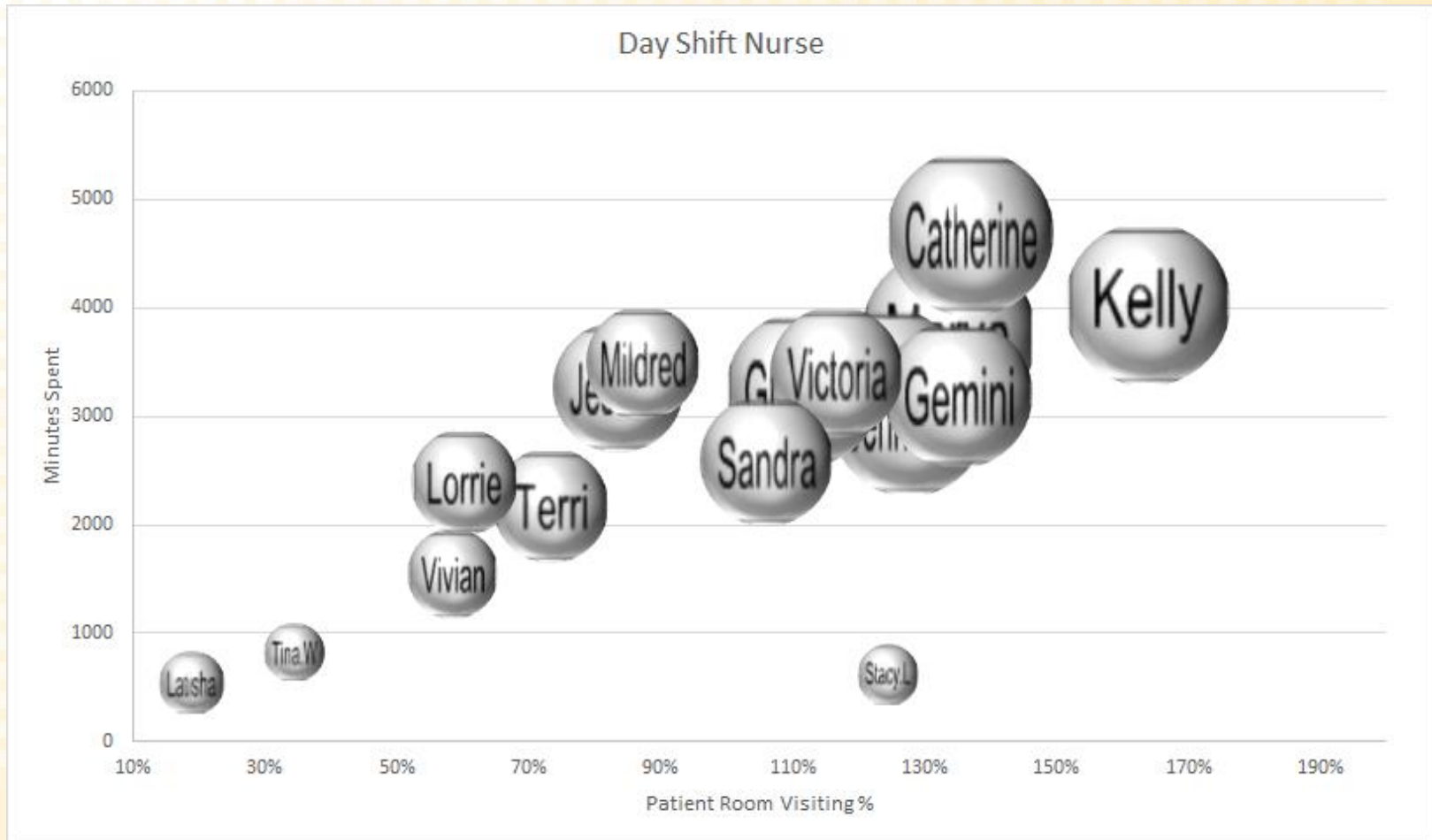
Nursing Assignments

Day Shift	Volumn	Rounding%	Total Minutes Spent
MARVA	1024	134%	★ 3737
KELLY	905	167%	★ 4037
CATHERINE	894	137%	★ 4690
DEBRA	882	124%	3266
JENNIFER	801	128%	2987
GUERLINE	797	112%	3257
GEMINI	727	135%	3198
VICTORIA	575	117%	★ 3411
SANDRA	570	106%	✗ 2587
JESSICA	567	83%	3271
TERRI	436	73%	✗ 2178
MILDRED	427	87%	★ 3500
LORRIE	376	60%	✗ 2401
VIVIAN	263	59%	✗ 1552
LATISHA	137	19%	537
STACY	122	124%	614
TINA	117	35%	823
Grand Total	9620	100%	46045

Process Validation



Process Validation



HCAHPS

HCAHPS Detail by Discharge Date (surveys received through 06/15/14)

Florida Hospital Celebration Health Units



HCAHPS/Inpatient Measures	Monthly Trend		Jan 2014		Feb 2014		Mar 2014		Apr 2014		May 2014		YTD 2014	
	Top Box/ Mean	%tile/Yes	Top Box/ Mean	%tile/Yes	Top Box/ Mean	%tile/Yes	Top Box/ Mean	%tile/Yes	Top Box/ Mean	%tile/Yes	Top Box/ Mean	%tile/Yes	Top Box/ Mean	%tile/Yes
6096C3IU														
Sample Size	384		86		61		82		92		39		360	
Rate hospital 0-10	91.0	99	93.0	99	90.0	98	90.0	98	93.4	99	87.2	96	91.3	99
Recommend the hospital	93.1	99	96.5	99	93.3	99	88.8	95	94.6	99	89.7	96	93.0	99
COMM W/ NURSES	87.5	96	85.7	91	89.5	97	84.6	87	87.7	95	87.2	94	86.7	93
Nurses treat with courtesy/respect	93.7	95	91.9	90	91.7	89	87.8	62	90.2	81	92.3	91	90.5	83
Nurses listen carefully to you	83.0	88	80.2	77	88.5	97	81.7	84	85.9	95	79.5	72	83.3	90
Nurses expl in way you understand	85.8	96	84.9	95	88.3	98	84.1	94	87.0	97	89.7	98	86.4	97
RESPONSE OF HOSP STAFF	78.2	92	71.9	78	85.8	99	62.0	32	78.0	92	76.0	89	73.8	84
Never pressed call button	27.6		32.6		19.7		15.9		31.5		28.2		25.8	
Call button help soon as wanted it	75.5	89	70.7	76	77.6	92	60.3	32	77.8	92	75.0	88	71.4	78
Need help bathroom/using bedpan	31.9		30.2		25.9		27.8		24.4		33.3		27.8	
Help toileting soon as you wanted	80.8	93	73.1	77	94.1	99	63.6	34	78.3	91	76.9	87	76.2	86
COMM W/ DOCTORS	90.5	96	92.5	98	95.1	99	91.8	98	89.1	94	81.2	52	90.7	96
Doctors treat with courtesy/respect	93.7	93	96.5	98	96.7	98	93.9	93	94.6	94	82.1	12	93.9	93
Doctors listen carefully to you	89.9	96	92.9	98	96.7	99	91.5	97	89.1	93	82.1	68	91.1	97
Doctors expl in way you understand	87.9	96	88.2	96	91.8	99	90.1	98	83.7	89	79.5	72	87.2	95
HOSPITAL ENVIRONMENT	84.9	98	84.7	98	85.2	98	82.8	97	85.2	98	89.7	99	85.0	98
Cleanliness of hospital environment	88.2	96	88.2	96	88.5	97	85.4	94	88.9	97	89.7	98	88.0	96
Quietness of hospital environment	81.6	97	81.2	98	82.0	98	80.2	98	81.5	98	89.7	99	82.1	98
PAIN MANAGEMENT	79.9	95	79.7	93	77.1	87	75.0	76	71.2	46	83.8	98	76.6	84
Need medicine for pain	88.9		91.7		88.1		92.5		84.8		94.7		89.8	
Pain well controlled	71.7	92	72.2	92	67.3	72	64.5	50	66.7	67	78.4	98	68.9	80
Staff do everything help with pain	88.2	95	87.3	93	86.8	92	85.5	89	75.6	28	89.2	96	84.2	83
COMM ABOUT MEDICINES	76.6	97	77.9	98	79.5	99	67.5	73	74.7	96	76.9	98	75.1	96
Given medicine not taken before	64.2		73.8		72.9		62.5		79.3		68.4		72.0	
Tell you what new medicine was for	87.7	95	90.3	98	93.2	99	80.8	75	89.0	97	88.5	97	88.3	97
Staff describe medicine side effect	65.5	97	65.6	97	65.9	97	54.2	72	60.3	90	65.4	97	61.8	93
DISCHARGE INFORMATION	94.1	96	95.0	98	95.5	98	93.2	96	93.9	96	86.5	52	93.5	96
Staff talk about help when you left	90.7	91	95.0	98	92.9	95	90.1	90	91.1	92	78.4	19	90.7	91
Info re symptoms/prob to look for	97.5	99	95.0	94	98.2	99	96.3	97	96.7	97	94.6	93	96.2	96
CARE TRANSITIONS (Mean)	90.7	99	91.1	99	90.7	99	87.9	97	90.0	99	92.5	99	90.2	99
Hosp staff took pref into account	89.0	99	89.3	99	87.0	98	83.7	92	88.0	99	88.6	99	87.2	98
Good understanding managing health	90.9	99	92.2	99	91.8	99	89.8	99	90.2	99	93.0	99	91.2	99
Understood purpose of taking meds	92.2	99	91.5	99	94.5	99	90.1	97	92.1	99	96.3	99	92.3	99
Nurse leader visit during your stay		92		89		89		82		87		89		87
Staff member visit you hourly		84		82		82		74		81		89		81

CMS View applied

HCAHPS Measures	75th	50-74th	<50th
Leader Rounding	95%	85-94%	<85%
Hourly Rounding	90%	75-89%	<75%

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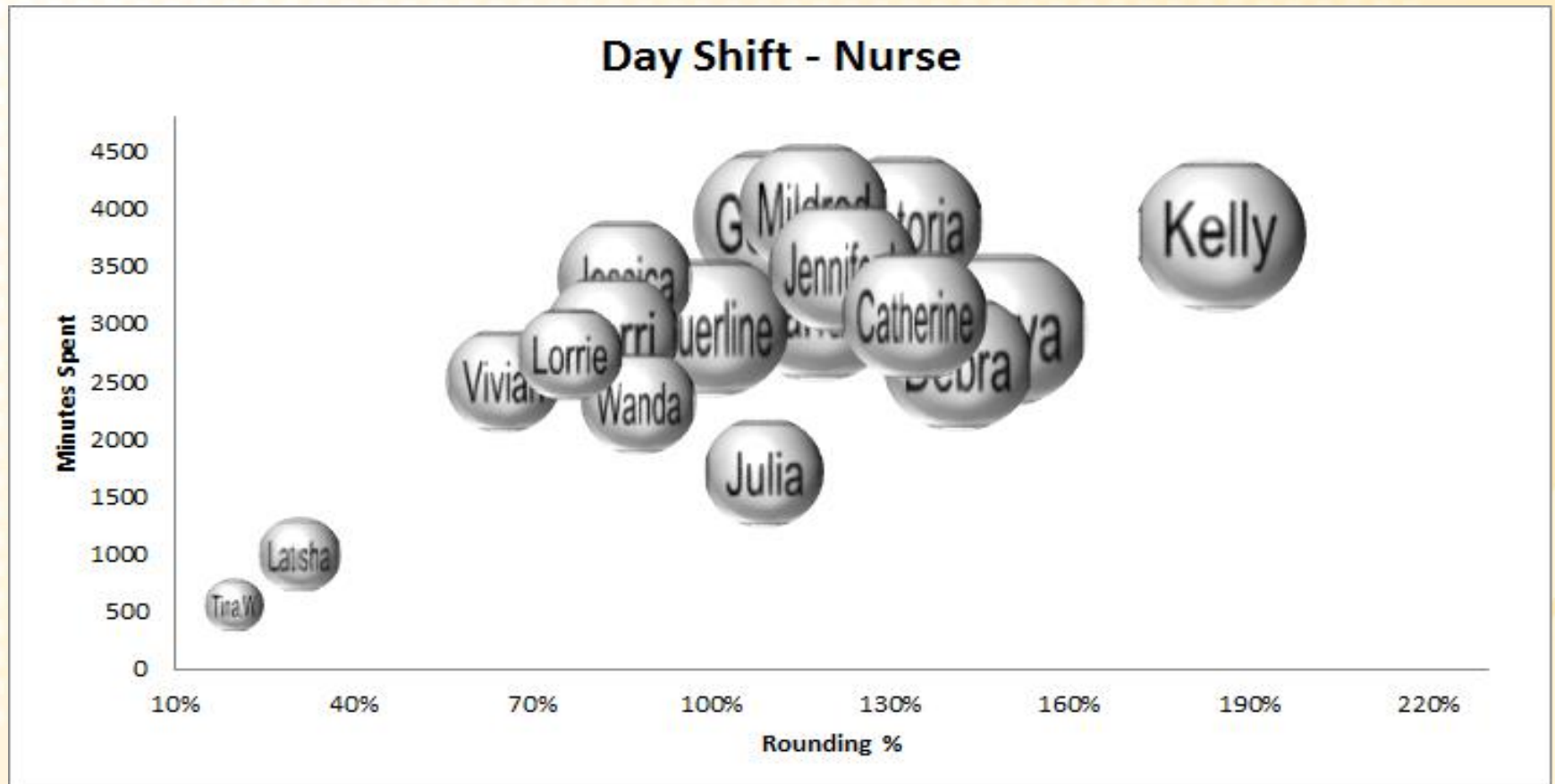


The skill to heal. The spirit to care.*

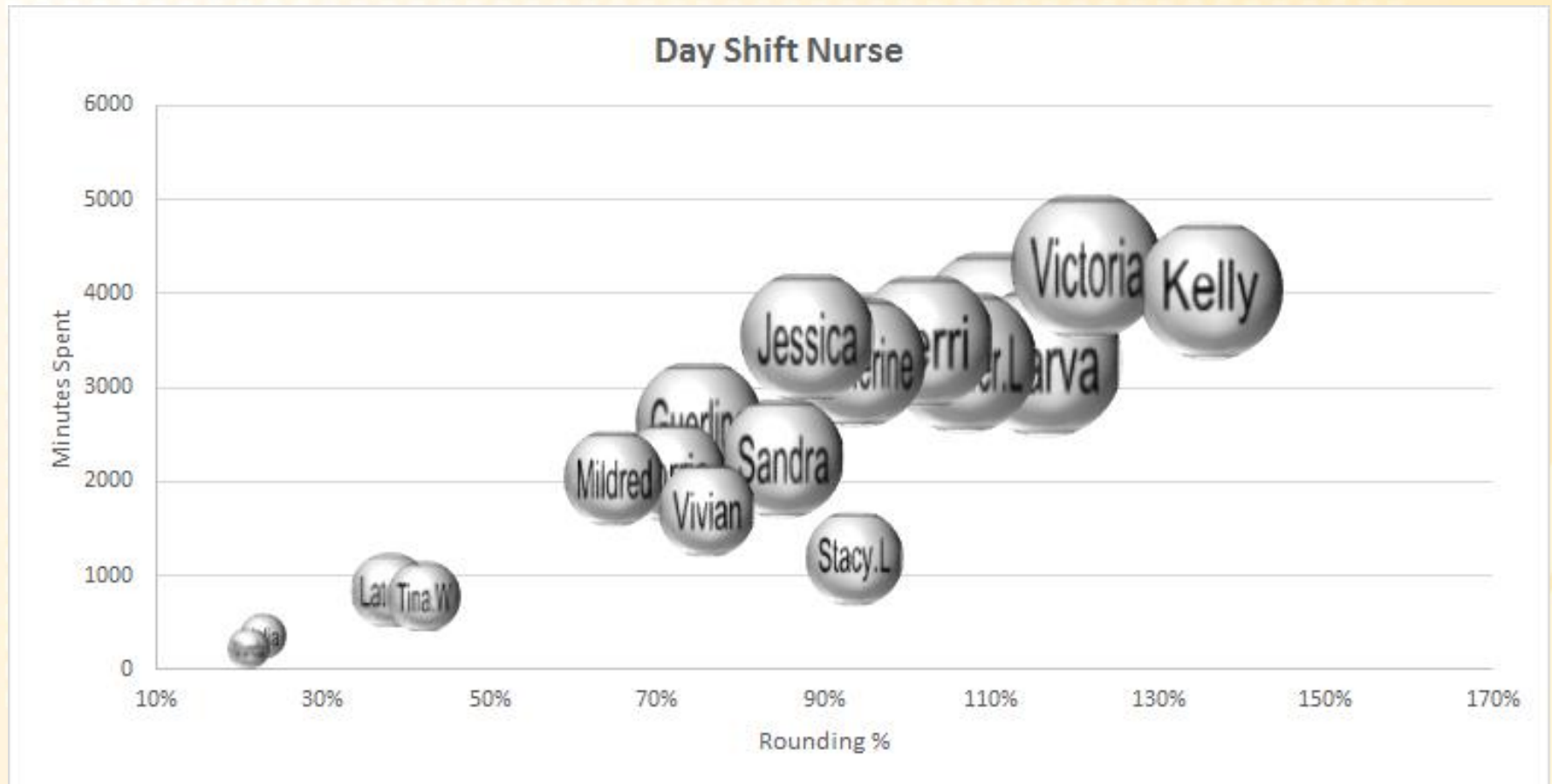
Nursing Efficiency

Day Shift	Volumn	Rounding%	Total Minutes Spent
MARVA	1036	149%	2961
KELLY	1025	185%	3776
SANDRA	982	118%	3159
GEMINI	948	111%	3888
VICTORIA	856	132%	3876
GUERLINE	838	100%	2976
DEBRA	802	141%	2663
MILDRED	785	117%	4005
JENNIFER	779	122%	3491
CATHERINE	754	134%	3079
JESSICA	646	85%	3389
TERRI	639	83%	2905
JULIA	506	109%	1708
WANDA	468	88%	2323
VIVIAN	463	65%	2505
LORRIE	390	76%	2741
LATISHA	241	31%	991
TINA	118	20%	552
Grand Total	12276	104%	50989

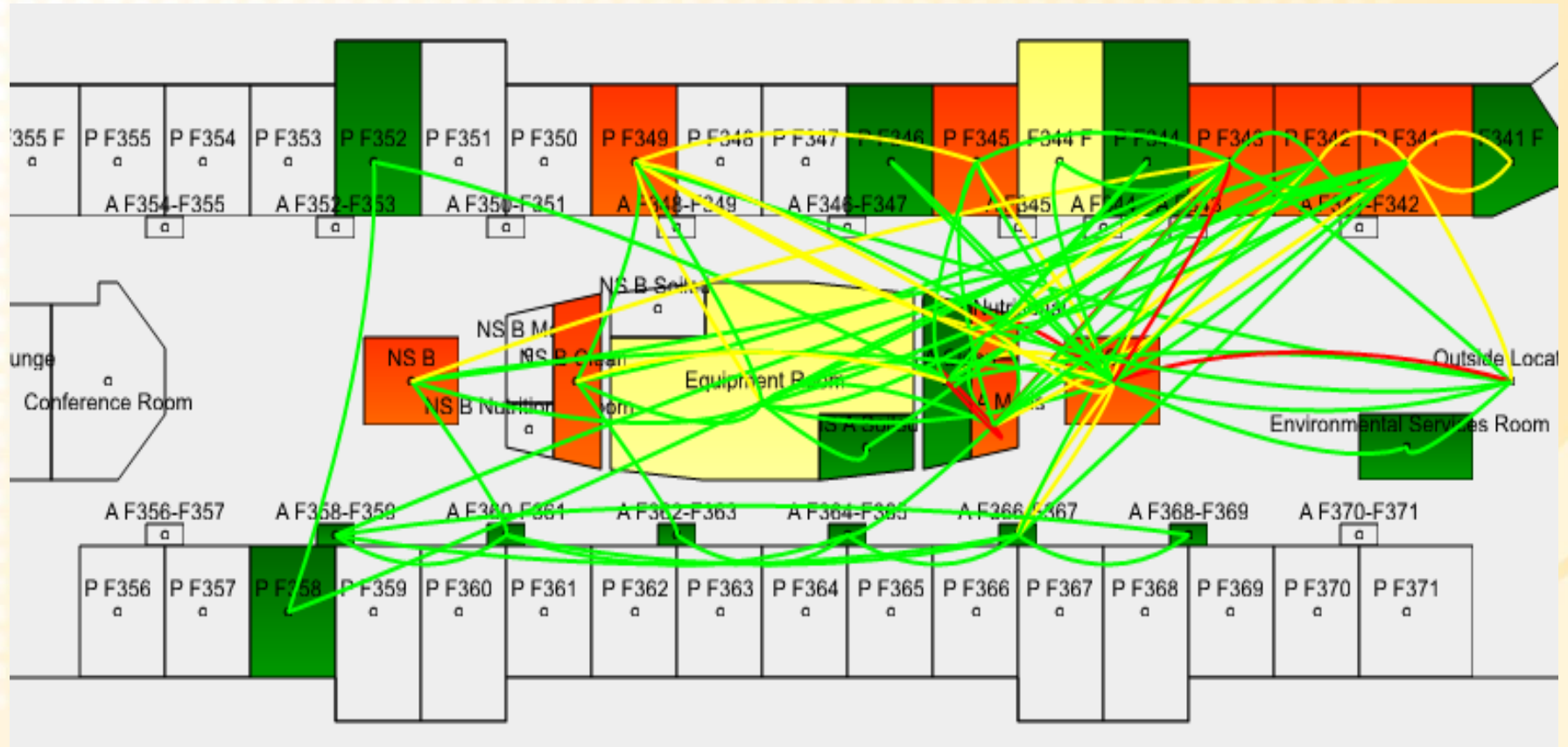
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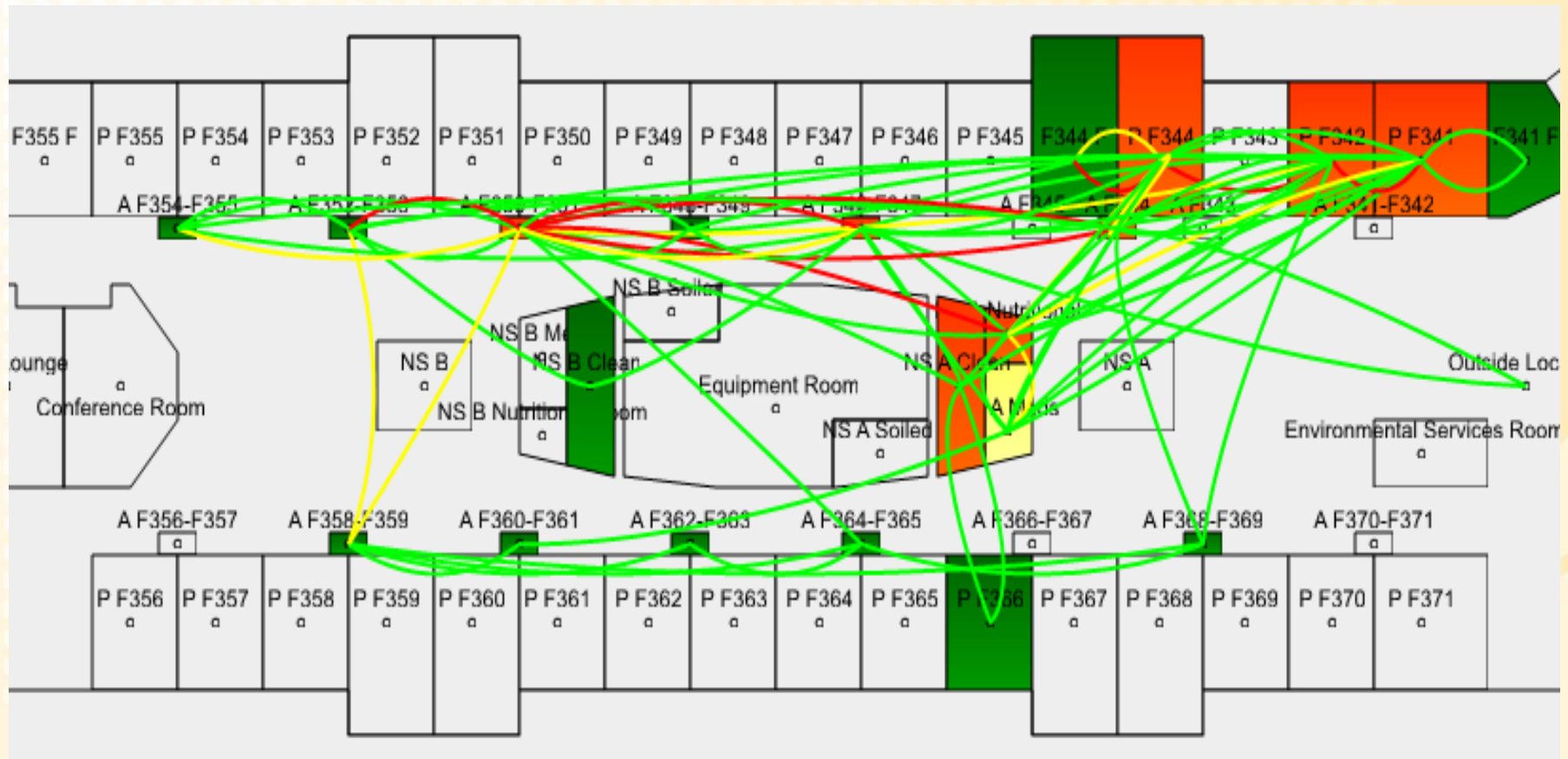
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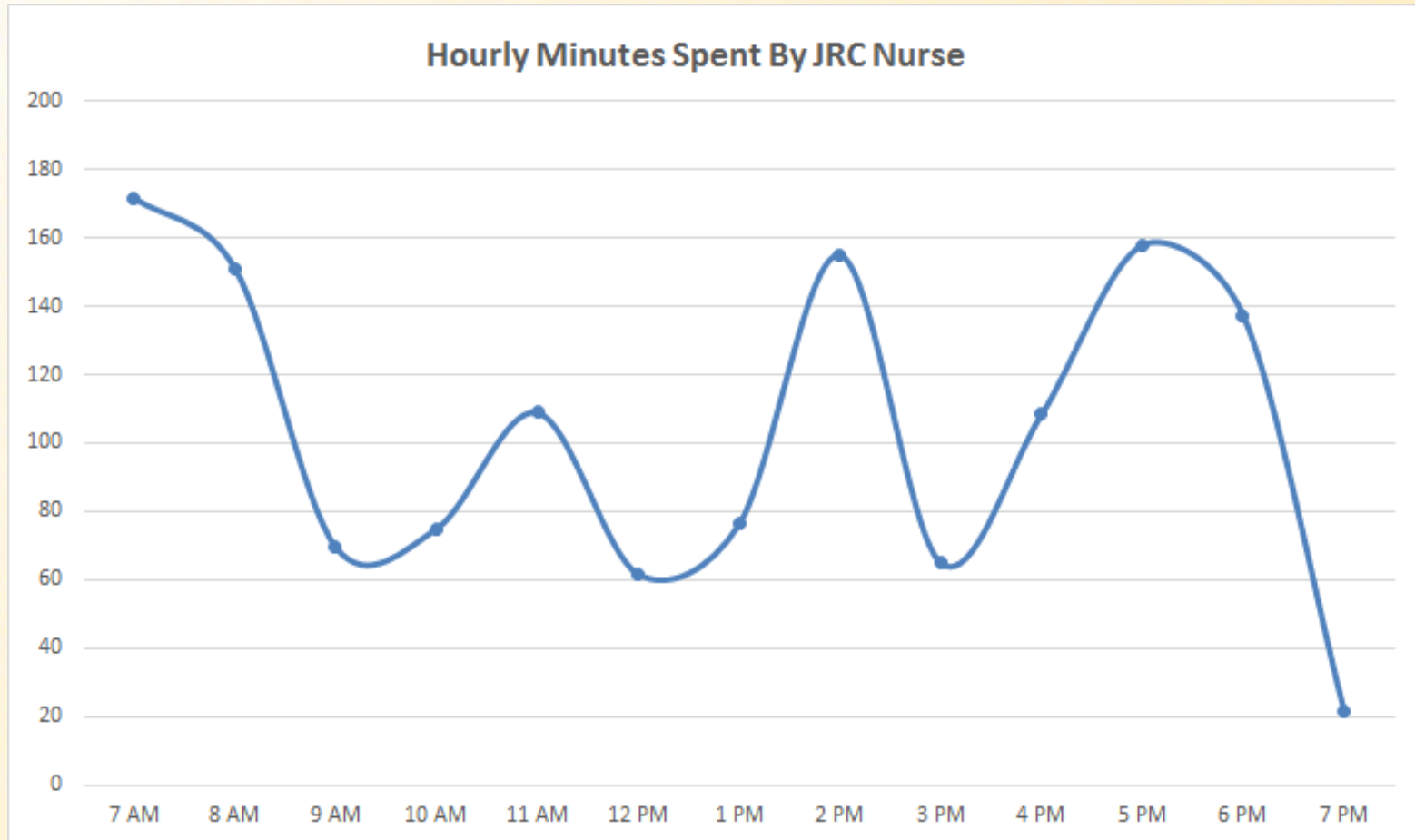
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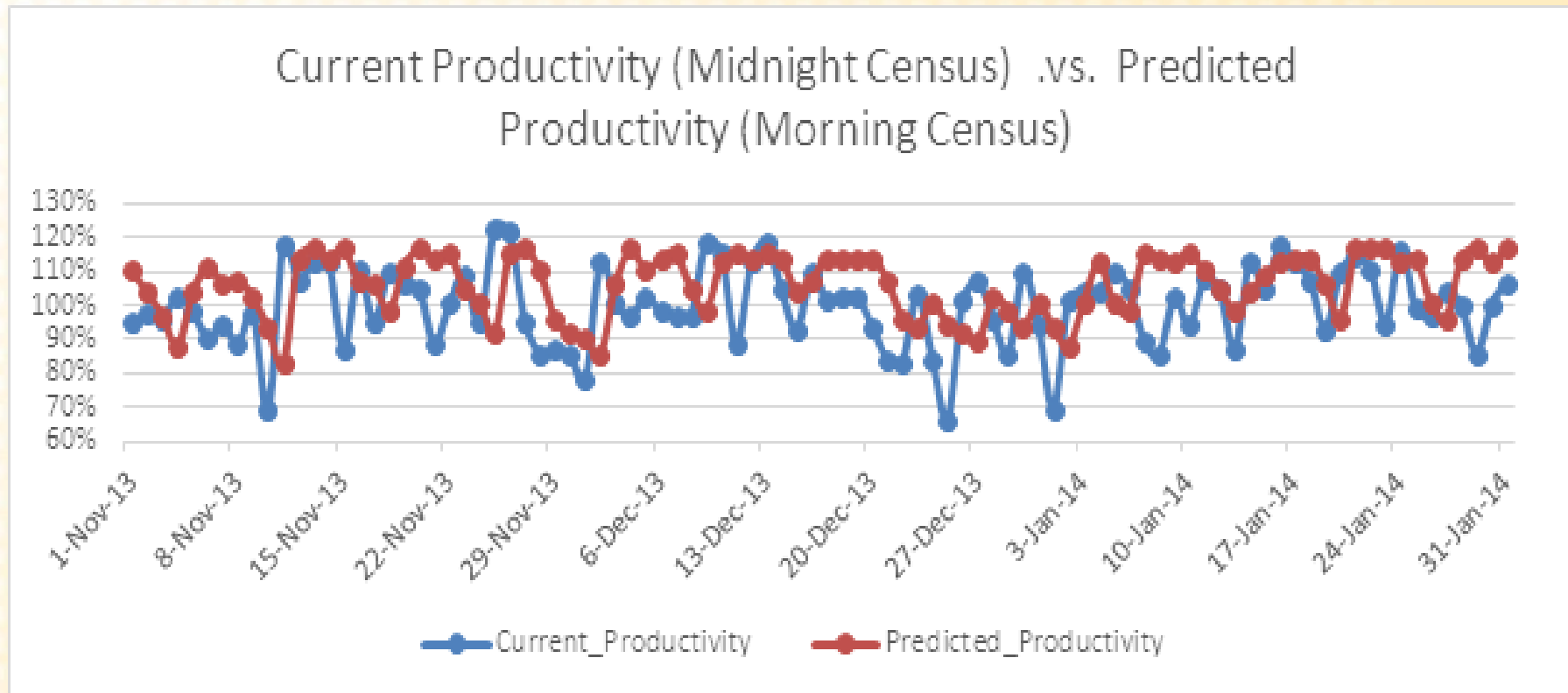
Nursing Efficiency



Nursing Efficiency



Future



Conclusion

- Validates Process Improvements
- Improves Nursing Efficiency
- Improves Patient Safety
- Improves Quality of Care
- Improves HCAHPS

Take Away

“There is a huge cultural component to the implementation of technology. You can install a lot of technologies, but if a technology doesn’t fit into the existing workflow, it won’t be adopted.”

Michael Fraai, director of biomedical engineering at Brigham and Women’s Hospital

Questions????



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