

Staffing “Correction” to 9-5

Adjusting CGHPPD to recognize
unit-specific needs

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October 8, 2010

Parallel Efforts

Donna Diers

Responding to request to evaluate clinical complexities within a general Med/Surg unit

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Developing an analysis to compare and contrast unit care-giver hours per patient day (cghppd) within Service Lines.

Background

A review of General Medicine non-Cardiac units was recently completed as an initial attempt to determine staffing “equity.” Factors compared included:

- Case Mix Index (CMI – a *very rough* indication of resource use)
- Care-Giver Hour Per Patient Day (CGHPPD – a standard industry metric quantifying care-giver resources), and
- Skill Mix (the percent of RNs to total care-givers of RNs plus Patient Care Assistants, or PCAs)

This review highlighted two units whose CGHPPD relative to their CMI appeared to be aberrant compared to their peers – 9-5 and 5-5:

		FY 2008			
CC#	Unit Name	CMI FY 2008	3/14/08 CGHPPD	3/14/08 Skill Mix	3/14/2008 Total CC \$s
52510	MED 10 7/8	1.1100	7.47	66%	2,218,626
52550	MED 9/5	1.3882	6.47	67%	2,440,569
52570	MED 5/7	1.6160	8.18	72%	2,613,024
52580	MED 9/7	1.0892	6.39	66%	2,664,474
52581	MED 5/5	1.3644	6.53	68%	2,389,537
52880	ACE 8/8	1.2629	7.68	51%	1,598,924
General Medicine Sub-total		13,925,154			

Discussions with these units' Patient Services' Manager (PSM) and Director confirmed that these were very busy units where it did not "seem" as though the staffing was adequate. Further research has since been completed to better understand both 5-5 and 9-5, their patient complement and factors influencing their resource utilization.

Here is 9-5

- General Medicine unit with HIV/AIDS
- 29 Beds, including 14 negative pressure rooms
- Budgeted census 26; actual 28
- Single rooms
- 6 “med psych” beds
- Two medical house-staff teams

Summary – data and databases

Finance: CGH, budget, actual, CMI

RIMS (Hospital data warehouse): admit source, discharge disposition, payers, age, diagnoses, MD teams, attending MDs

DAART (operational database): contact census (census plus ADT)

CCSS (SCM) (Electronic Medical Record): WoRKload

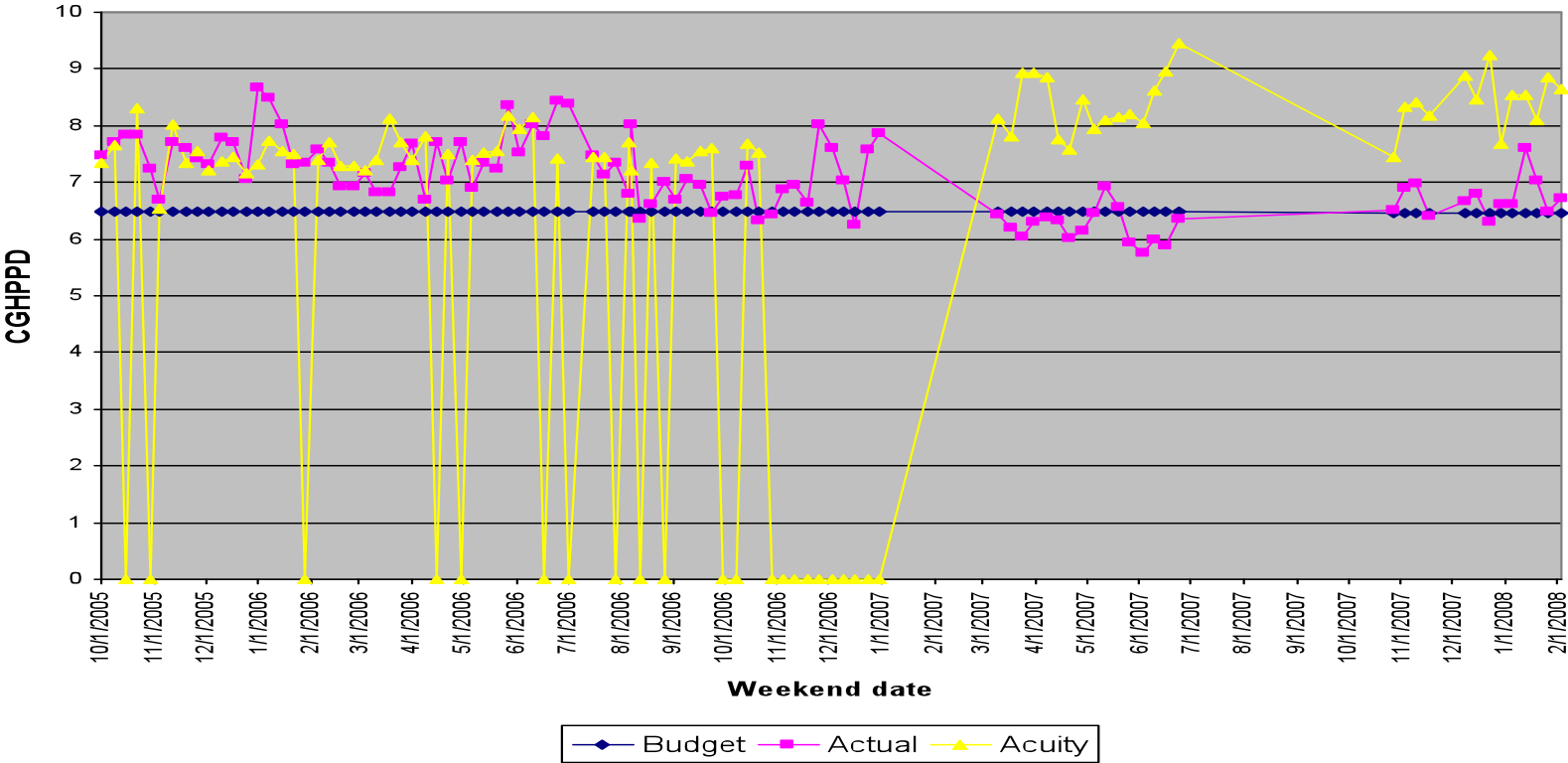
Clinical Epidemiology: isolation patient days

Purchasing: isolation gown purchases

Special database: RRT calls

Field trip: description of architecture/geography

9-5 Budget, Actual & WoRKload CGHPPD



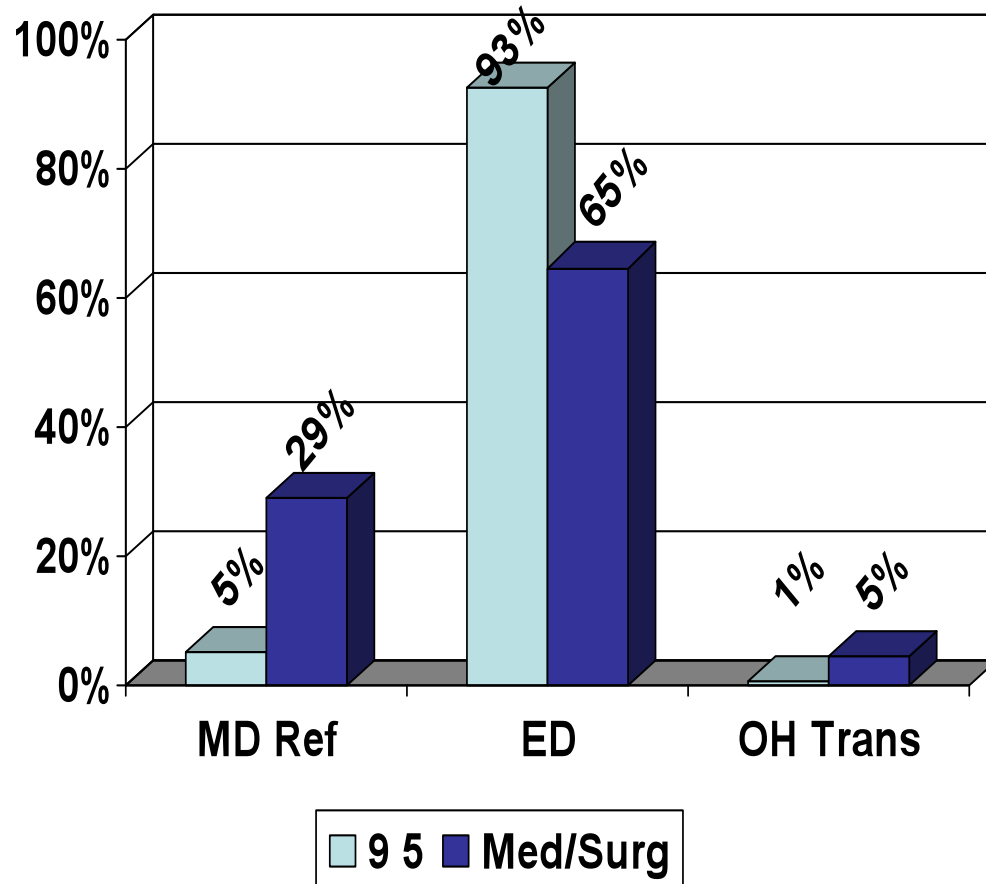
Oct - Jan Averages:			
	<u>Budget</u>	<u>Actual</u>	<u>Acuity</u>
Average	6.47	6.74	8.41
Diff to Acuity	1.94	1.67	
% Diff	30%	25%	

Acuity averaged 8.41 for Oct-Jan 2008, 25% higher than actual and 30% higher than budget.

Zero values indicate that no monthly report was available for that time period

Admit Source 9-5 (%)

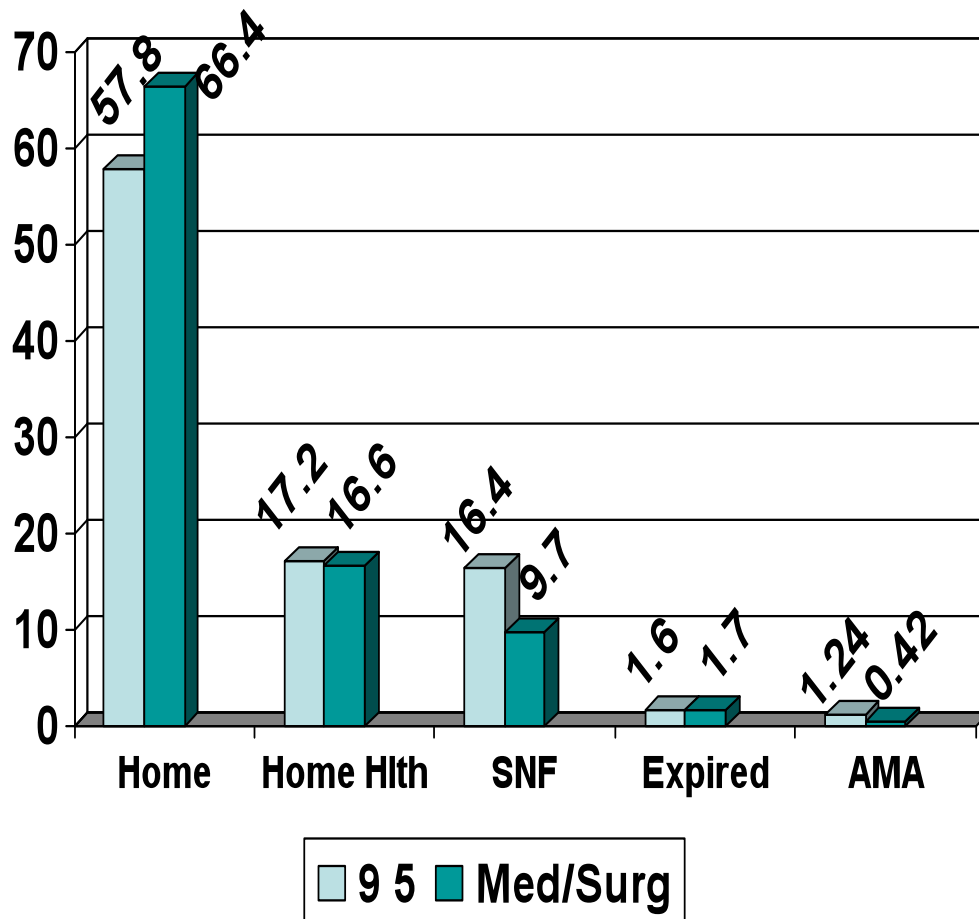
FY 2007



- 92.5% of admissions to 9-5 are from the ED
- YNHH Med/Surg average is 64.5%
- 9-5 receives 43% more admissions from the ED than the Hospital average

Med/Surg = all DRGs except Maternity and Newborn (370-391)

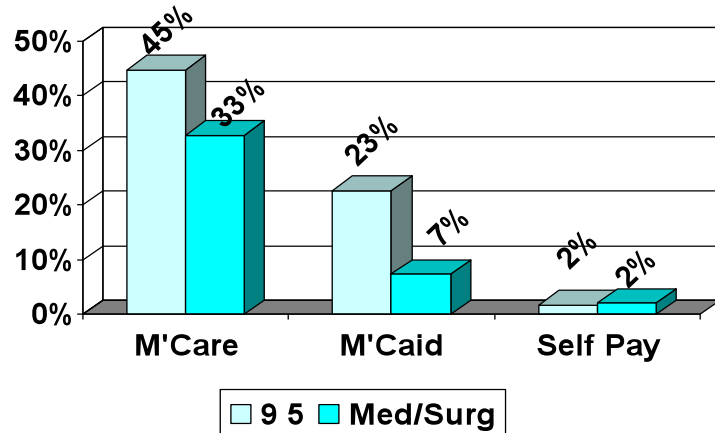
Discharge Disposition – 9-5 (%)



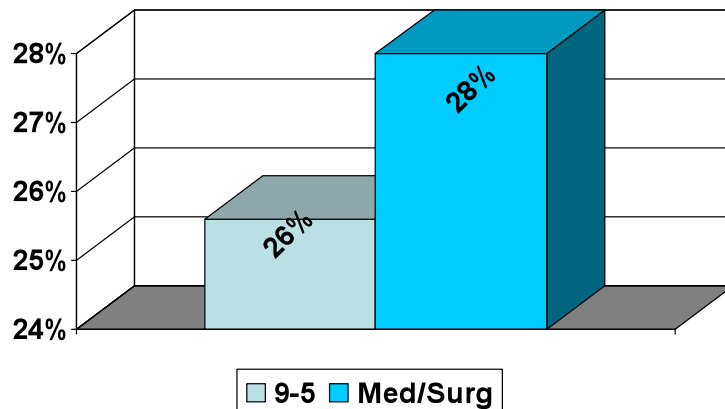
- 9-5 discharges only 57.8% to **home** compared to 66.4% for Med/Surg
- 9-5 discharges 33.6% to **home health or SNF** compared to 26.3% for Med/Surg

Payer Mix and Age

Excerpts from Payor Mix % of Total

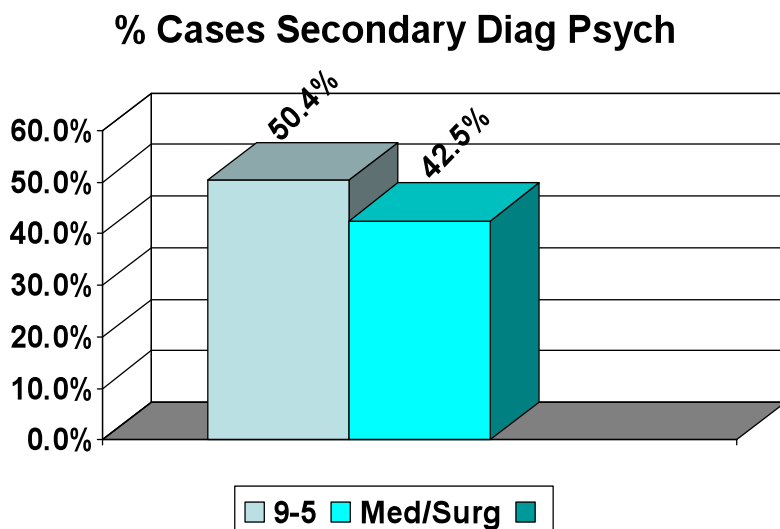
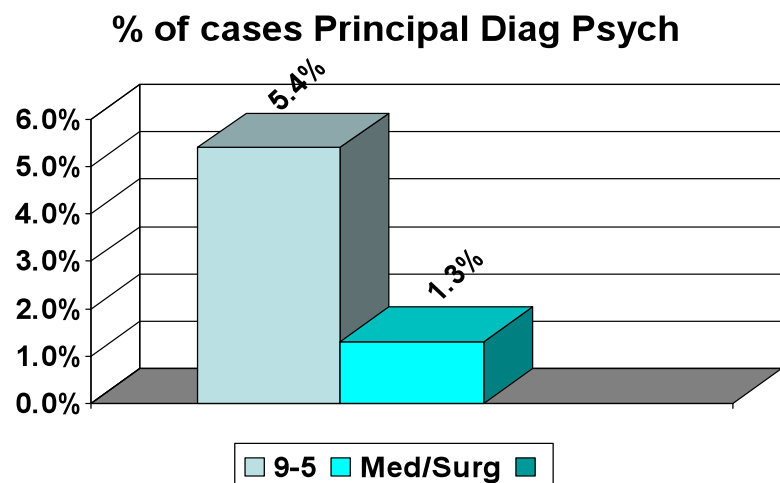


% of Cases w/Age > 65



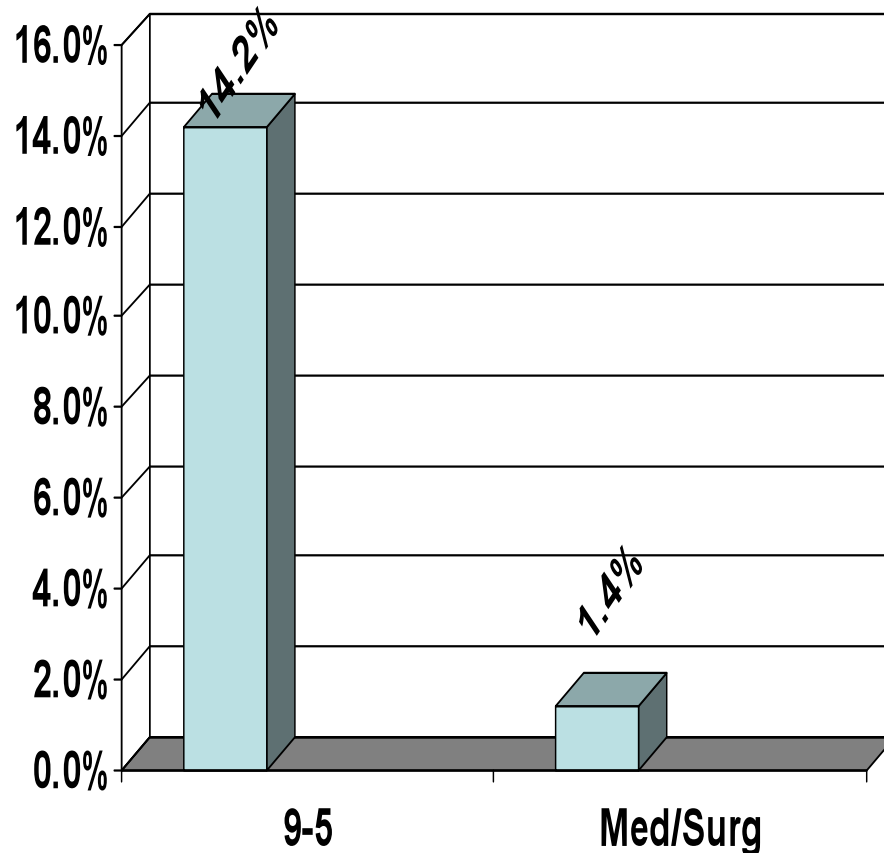
- 45% of 9-5 patients are Medicare, vs 33% of Med/Surg
- 26% of 9-5 patients are >65, vs 28% of Med/Surg
- Therefore, 9-5 receives more Medicare “disabled”/ESRD patients than Med/Surg

Prevalence of Psychiatric related illness



- 5.4% of 9-5 patients' **principal diagnosis** is Psych, vs 1.3% of Med/Surg, or **315% higher** than Med/Surg
- 50.4% of 9-5 patients' **secondary diagnosis** is Psych, vs 42.5% of Med/Surg, or **19% higher** than Med/Surg
- Overall, 55.8% of 9-5 patients have a Psych principle or secondary diagnosis, vs 43.8% of Med/Surg, or 27% more than Med/Surg
- Psych diagnosis includes substance abuse

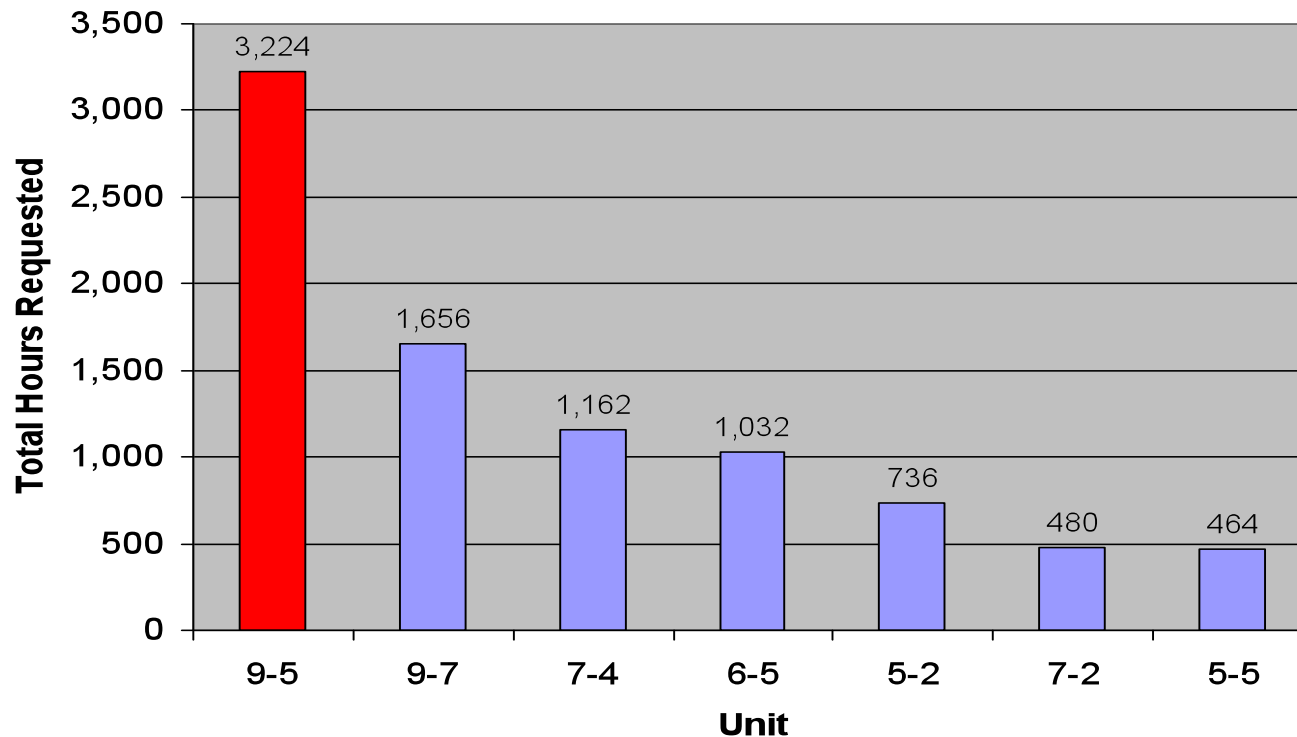
Tobacco Use Disorder - % 2nd Dx



- 14.2% of 9-5 patients have a Tobacco Use Disorder compared to 1.4% of Med/Surg
- It is very difficult to manage this particular addiction, especially if patients can't walk and need to be assisted to the smoking area outside.

Med/Surg excludes maternity, newborn and psychiatric DRGs

Constant Companion use for 2 months: Dec 07 – Jan 08



The high number of Psych primary and secondary diagnosis has resulted in a high need for Constant Companions

Geographic configuration

- All private rooms, 14 of which are negative pressure, and therefore receive the patients who are, by definition, either infected or have behavioral problems to manage.
- East Pavilion has least storage space at point of care; supplies necessary for isolation patients incur outages more often due to reduced corridor storage and (currently) require staff to restock.
- Rooms don't accommodate both a bed and a gurney so patients have to be transferred in the hall.
- Bathrooms are too small to accommodate both the patient and the nurse, and the nurse, essentially, simply "gets wet" while caring for the patient.

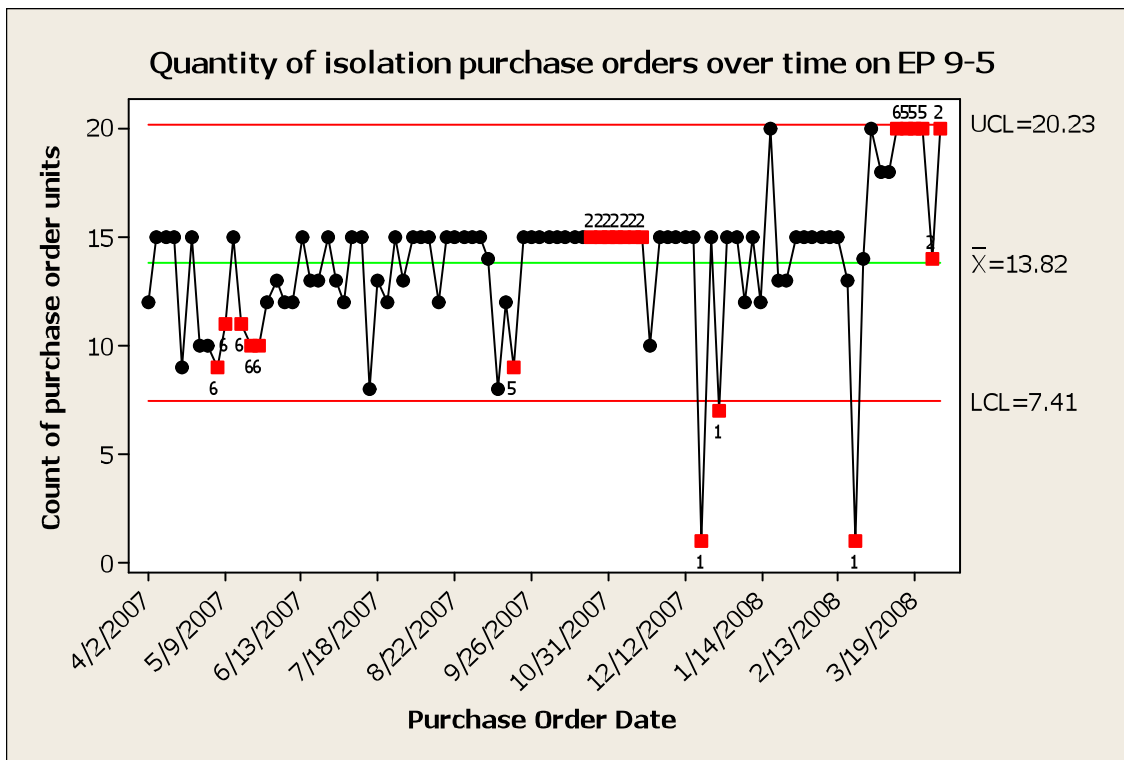
Impact of Isolation: # of Pt Days on Patient Care Unit Comparisons

Service	Pavilion	ICU / Floor	Patient Care Unit	Percent of Isolation Days
Medicine	EAST	Floor	EP 9-5	63.93
Medicine	EAST	Floor	EP 5-5	47.51
Pediatrics	SOUTH	Floor	SP 7-3	44.24
Oncology	WEST	Floor	WP 9	38.73
Surgery	EAST	Floor	EP 7-5	37.95
Medicine	EAST	Floor	EP 5-7	27.53
Medicine	EAST	Floor	EP 10-7	25.95
Medicine	EAST	Floor	EP 9-7	19.41
Medicine	EAST	Floor	EP 8-8	16.41

9-5 has highest % of isolation

9-5 has a high percent of immunological compromised patients on reverse isolation. 9-5 as the highest user of gowns is a factor of both patients on isolation precautions and reverse isolation.

EP 9-5 Blue Isolation Gown Purchase Orders



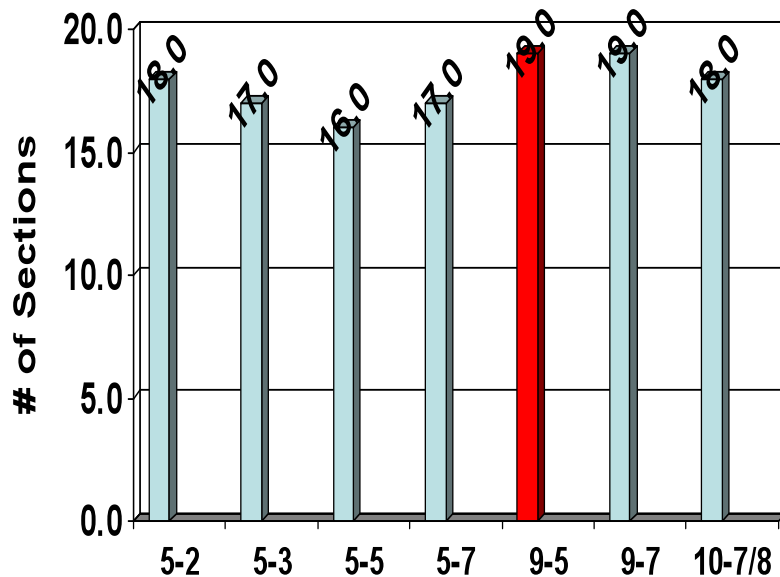
There has been a statistically significant increase in isolation gown purchase orders on EP-95 for FY 2008.

This suggests an increase of isolation patient days and/or improved compliance with isolation precautions.

Data Source: 4/1/07 to 3/31/08 Purchase Orders – Materials Management

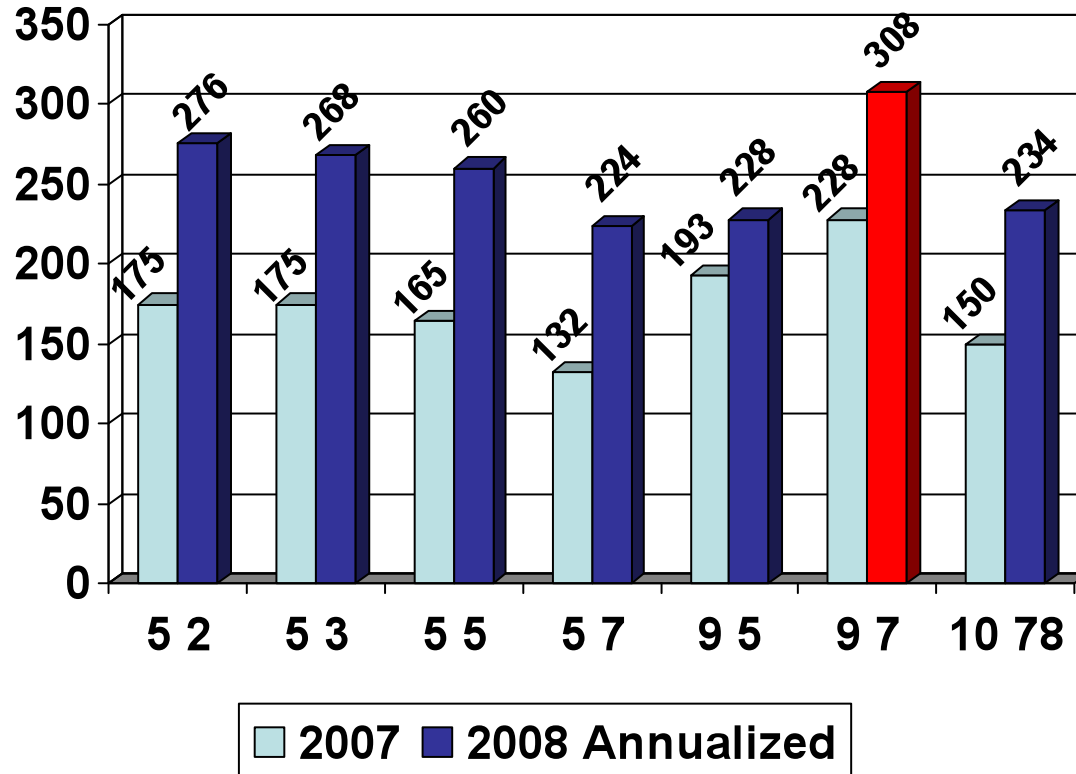
Nature of Physician Team

MD Sections by Med Nsg Unit



- **9-5 had 18 of the 25 internal medicine MD sections**
- **The more MD Sections and Teams, the more work it takes for the nurse to “track down” the physician**

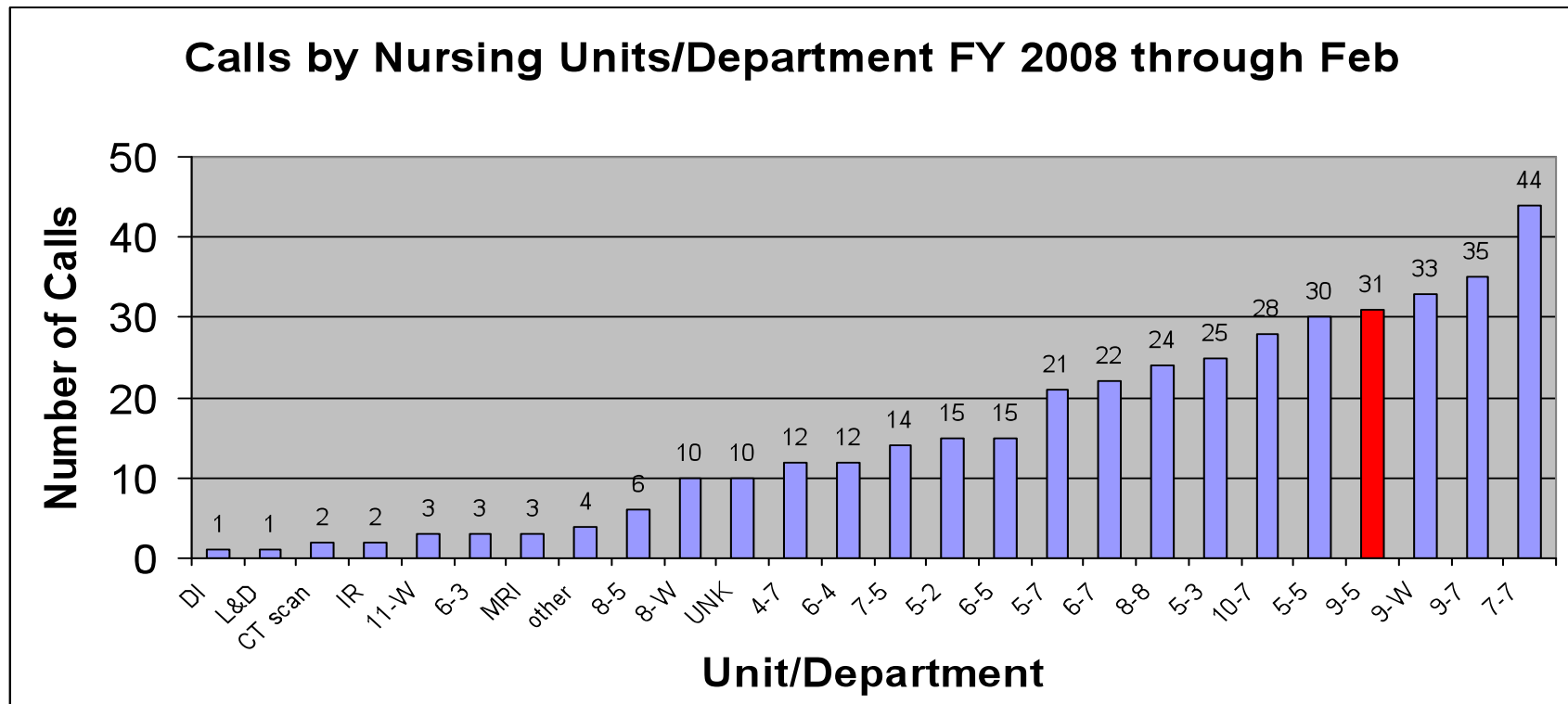
Attending MD by Medical Nursing Unit



The more physicians, the more work it takes for the nurse to “track down” the physician.

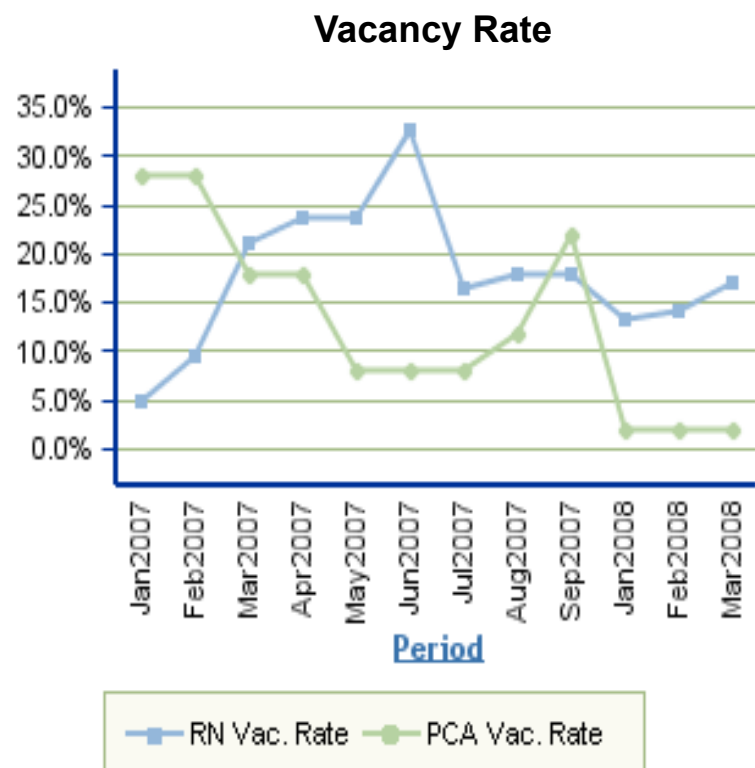
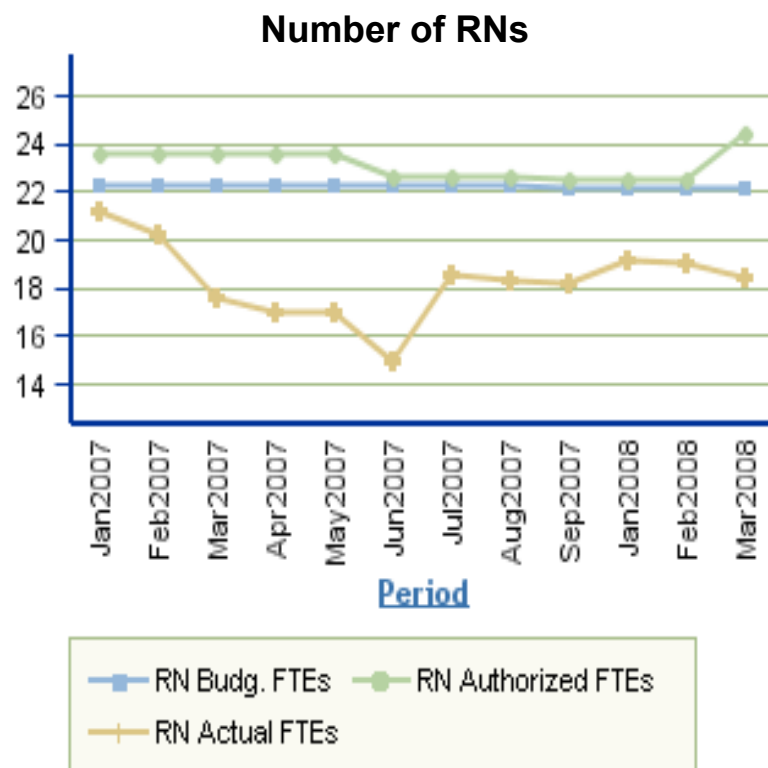
Note: 2008 through March Annualized; includes Hospitalists

Number of Rapid Response Team (RRT) calls



Calls for the RRTs are criteria based. Use of the RRT is intended to avoid an ICU admission.

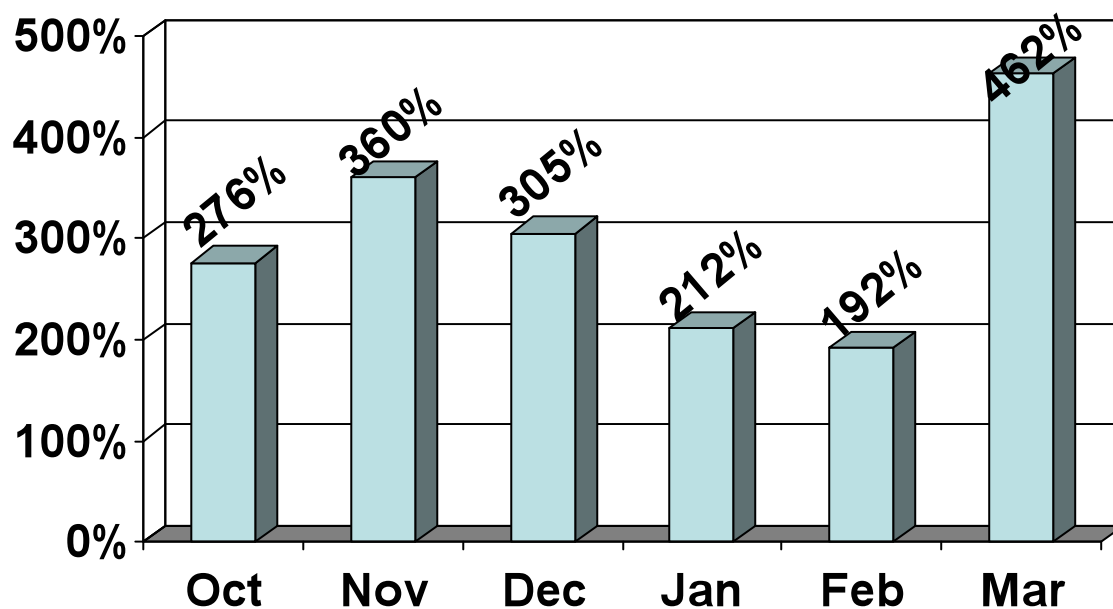
Staffing RNs and PCAs



- Although vacancies have improved over 12 months, 9-5 remains a difficult unit to staff RNs
- PCA staffing has stabilized

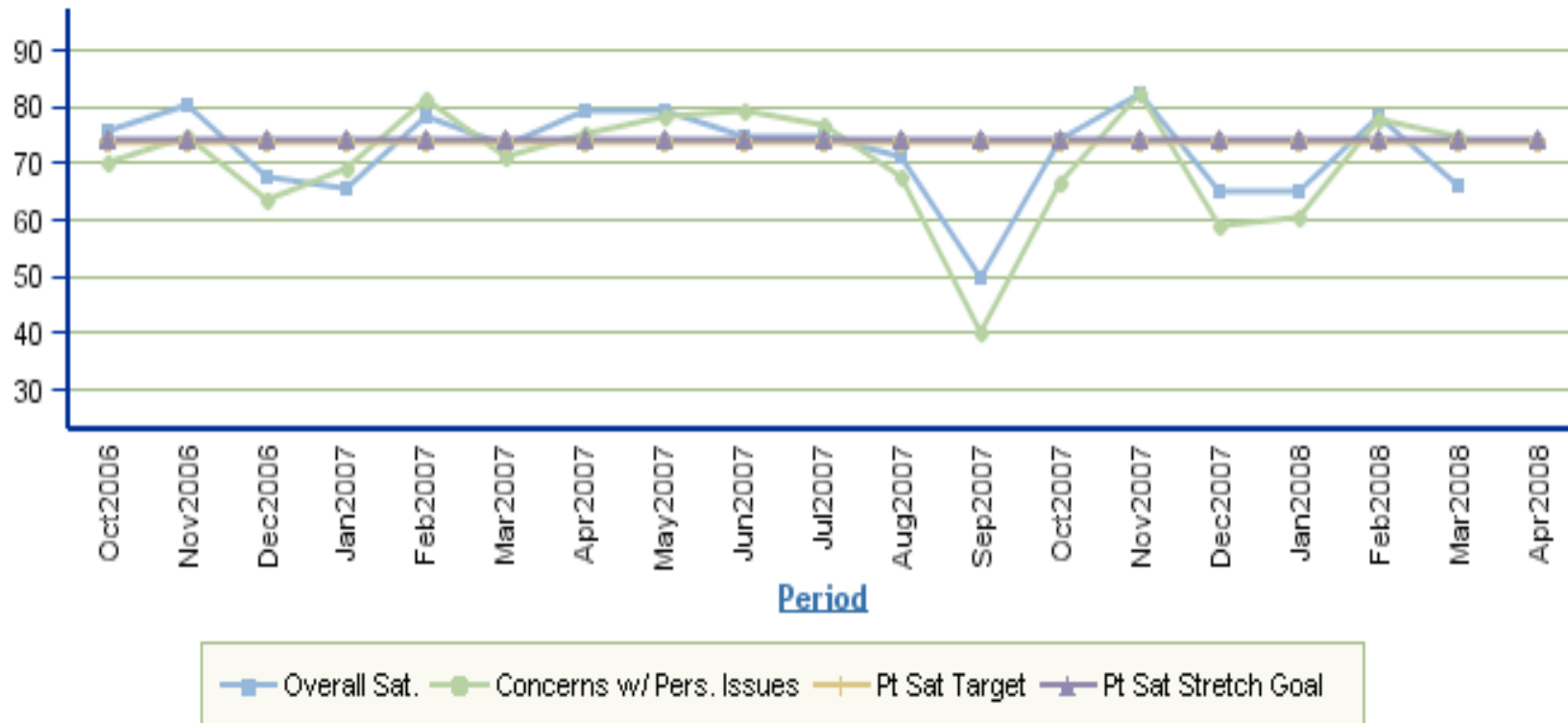
Overtime over budget

% Overtime over budget



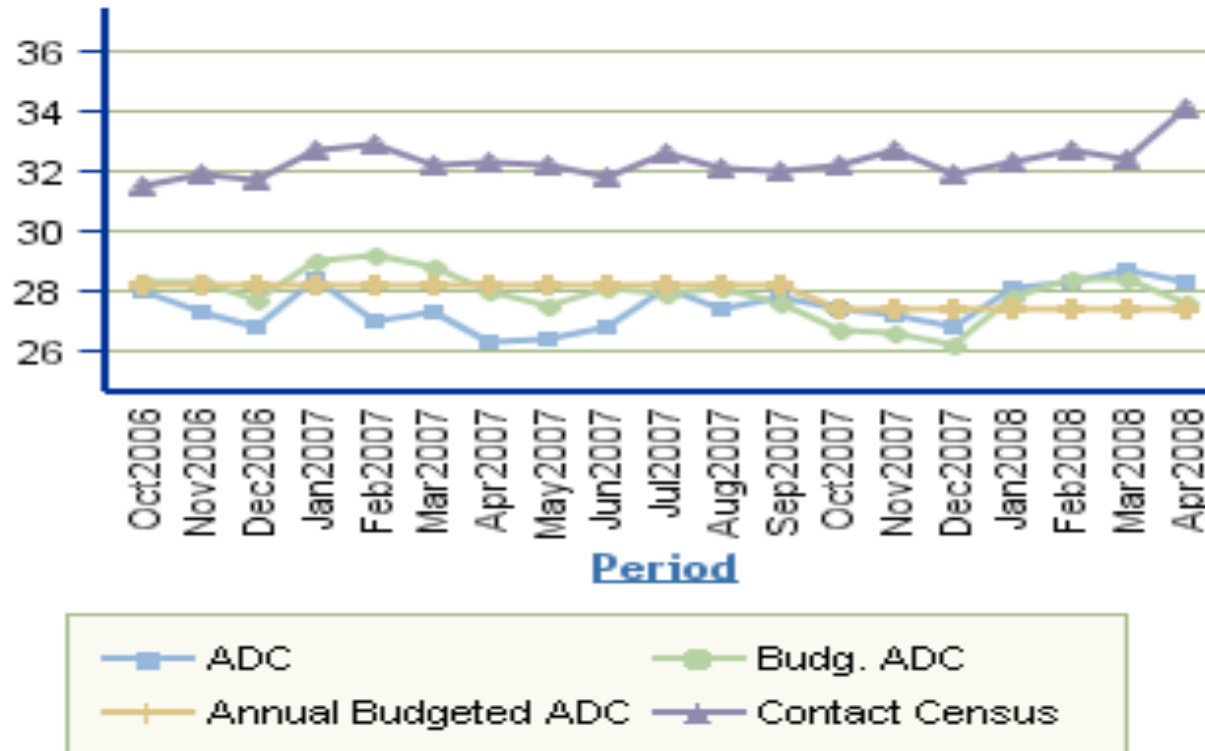
Consistent with difficulty in staffing, overtime is significantly over-budget for six months ending March 2008

Patient Satisfaction (based on dates of service)



Achieving Patient Satisfaction targets continues to be challenging; the number of surveys returned is small.

Contact Census



For the first 22 days of April:

- Budgeted census = 27.6
- Average Daily Census = 28.3
- Contact Census = 34.1

The variance of contact census from ADC on this unit is in part attributable to the pressure to decant the ED. Pts are moved to 9-5 and may or may not stay there, necessitating additional RN resources to facilitate patient movement.

Proposed Increase in CGHPPD

- Staffing complement for and ADC of 28:
 - 7.0 RNs during days, 6.0 during evenings and 5.0 during the nights
 - 3.0 PCAs during days, 2.0 PCAs during evenings and nights
- CGHPPD:
 - Current 6.47
 - Proposed 7.40
 - Incremental 0.93
- Resulting ongoing incremental cost:
 - \$393,664 Salary including OT
 - 104,094 Fringe
 - \$497,758** Total

Increase to isolation gown

- In September 2007, the unit began a change in process to better comply with isolation precautions
- 6 Months YTD variance on that CCBR line item = \$13,500; 12 month variance approximates \$27,000

Executive Summary

Challenge: 9-5 CGHPPD are low relative to other Medicine units, considering their high CMI and patient complement. Overall, 63.9% of days are on isolation, 55.8% of patients have a Psych principle or secondary diagnosis, and 14.2% have a Tobacco Use Disorder, all contributing to significant resource utilization.

Unit-specific metrics includes:

- CGHPPD of 6.47 with CMI of 1.3882
- Acuity averaged 8.41 for Oct-Jan 2008, 25% higher than actual and 30% higher than budget
- 92.5% of admissions are from the ED
- 33.6% of discharges are to Home Health or SNF
- 45% Medicare payer mix with only 26% over 65
- 55.8% of patients have a Psych primary or secondary diagnosis
- Geographic configuration fosters resource-intense patients

Executive Summary, cont.

Unit-specific metrics, continued:

- 14.2% of 9-5 patients have a Tobacco Use Disorder compared to 1.4% of Med/Surg
- Highest % of isolation patient days and corresponding high use of isolation gowns
- High *number* of Attending MDs on unit
- Relatively high use of Rapid Response Team calls
- High RN vacancy level and high use of overtime
- Moderate achievement of Patient Satisfaction
- High contact census

Proposal: increase CGHPPD by 0.93 for an ongoing incremental annual cost of **\$497,758**, including overtime and fringe benefits.