



VANDERBILT  UNIVERSITY  
MEDICAL CENTER



# Managing Staffing Expense: H-P-P-D Initiative

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I have no actual or potential conflict of interest in relation to this program / presentation.

# Vanderbilt University Medical Center

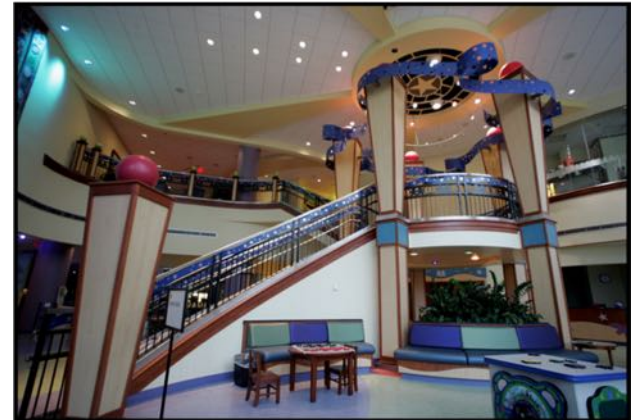


- Not-for-profit Academic Medical Center with 143 year history
  - Vanderbilt University Adult Hospital
  - Monroe Carell Jr. Children’s Hospital at Vanderbilt
  - Vanderbilt Psychiatric Hospital
  - The Vanderbilt Clinics
- 1100 beds combined
- Middle Tennessee’s only Magnet® designated organization
  - Third Designation received July 2017

- Level 1 Trauma Center
- Level 4 Neonatal ICU
- Dedicated Burn Center
- NCI Designated Comprehensive Cancer Center for adults and children
- Tennessee's only comprehensive solid organ transplant center



- Largest private employer in Middle Tennessee and second largest in the state
- 21,000 employees
  - 6000 plus nurses
  - 1000 plus APRNs
- Provides 513 million a year in charity care
- Most comprehensive children's hospital in the multi-state area
  - Regional referral center
  - 4 new floors under construction





# Objectives

After attending this presentation / discussion, the conference participant will be able to discuss an implementation strategy to decrease unnecessary staffing resources:

- how to include all levels of the team
- share the “why”
- create the tools
- monitor the results

# Neonatal Intensive Care Unit (NICU)



- 96 bed Level IV
- Private rooms / Open bay
- 1,500 admissions annually (50% surgical)
- Inborn / Outborn
- Prematurity, birth defects, respiratory distress, infections
- Family-centered care
- 300 plus nurses

# Opportunity for Improvement

## Nursing Dashboard - NICU

Daily Direct Hours PPD - Nursery ICU (NICU)							
Last 7 days	07/19 SUN	07/20 MON	07/21 TUE	07/15 WED	07/16 THUR	07/17 FRI	07/18 SAT
Actual Direct Hrs	1,044.4	1,117.5	1,112.5	1,108.8	1,248.2	1,143.1	1,073.3
Patient Volume	73	74	73	79	80	78	76
Direct Hrs PPD	14.3	15.1	15.2	14.0	15.6	14.7	14.1
Budget Direct Hrs PPD	12.9	13.3	13.3	13.2	13.3	13.3	12.9
Variance	-1.4 ●	-1.8 ●	-1.9 ●	-0.8 ●	-2.3 ●	-1.4 ●	-1.2 ●
Rolling 4 Week Avg Direct Hrs PPD	14.1	14.6	14.3	13.8	14.5	14.1	13.6



# Initial Steps

Analysis of staffing decisions for past 90 days

- HPPD targets met 46% of the time
  - Assumed due to patient acuity
- Identified need to decrease unnecessary staffing resources
  - Admission spots
  - Discharges
  - RN volunteers

# Planning the Intervention

Leadership team developed

- Shift goals to reach daily target
  - to increase personal accountability
- Plan to roll-out information to Clinical Staff Leaders
  - hybrid leadership role

# Methods

Met with Clinical Staff Leaders (CSL)

- Educated on the “why”
- Reviewed budget basics

# ANA Recommendations

The American Nurses Association (ANA) states that staffing of any nursing unit should always take three things into consideration:

- the achievement of meeting quality patient outcomes
- creating a manageable workload per nurse that supports quality lifestyle and positive work environment
- being fiscally responsible to the organization

## No money – No mission

- Healthcare is a business
- Payment involves insurance, government agencies, and private pay patients
- Uncompensated care
  - Costs that are never paid
  - Uninsured / underinsured
  - VUMC provides the largest share in the region
    - \*actually more than all of the middle TN hospitals combined*
  - Over 500 million per year at last report

# Reimbursement Challenges

- Payment incentives are outcomes focused
- Reimbursement will be tied to performance measures
  - Clinical
  - Patient satisfaction
- “Never” events
  - Events that shouldn’t happen during hospital stay
  - Pressure ulcers, falls, hospital-acquired infections



# Reimbursement Challenges

## Revenue

- Based on charges
- Payers vary (in type and amount)
  - By diagnosis (DRG) and procedures
  - By patient day

# Why focus on labor expenses?

- Wages and benefits account for nearly 60% of total hospital costs
  - Salary, OT, shift differentials, orientation, inservice, vacations, medical leaves, benefits
  - RN salaries account for largest share of those costs
- Over budget = no replacement or new positions

## Hours per Patient Day (HPPD)

- The amount of care each patient will receive in 24 hours
- Formula: hours of care / patient days
- Establishes a ratio between staffing and volume
  - Resource and workload

# HPPD

- Flexible metric
  - Volume up then staffing should be up
  - Volume down then staffing should be down
  - Match resources to volume
- Budgeted HPPD remains constant

# HPPD Formula


$$\frac{\text{direct care staff hours}}{\text{census}} = \text{HPPD}$$

$$\frac{(\text{RN}\# * 12) + (\text{RN}\# * 8) + (\text{CP}\# * 12)}{\text{census}} = \text{HPPD}$$


Wait ---- math???

Is there an app for that?






**HPPD 1-2-3**  
Helping you calculate the  
what-ifs, in the right now.  
Brought to you by Kronos for Healthcare.



Carrier 1:50 PM



Time Frame: **Shift** Day

How many Patients?

How many Direct Care RNs?  
8 Hour Shifts:  12 Hour Shifts:

How many Direct Care Non-RNs?  
8 Hour Shifts:  12 Hour Shifts:

How many InDirect Caregivers?  
8 Hour Shifts:  12 Hour Shifts:

RNs	Non-RNs:	InDirect:
<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>

Total Hours per Patient:

# Methods

- Identified CSL “super-users” for each shift
- Developed education plan for NICU Shift Leaders (SL)
- Collaborated on reporting tools to track staffing utilized /  
variances
- CSL team trialed tools for 2 weeks

4434 4435 4436			← Blue →			(B) 4441d (A) 4441c 4442			← Red →			4554 4555 4556			G 64664			4561 4562		
D 64661						E 64745						F 64663 ♥								
4433 4432 4431			(B) 4444d (A) 4444c			4443 4553 4552 4551			4566 4565			(A) 4564 (B)								
4424 (B) 4425d (A) 4425c 4426			RSL OOS: _____ RSC/PICC: _____ VCH: _____ A/J: _____ VUH: _____ Total RNs= _____			Notes: _____			Date / / Day			T-VCH _____ Van 1 Van 2								
C 64660			Total Assignments: _____			4572 4575			4576			4-VUH <6 (01) <6 (26)								
4423 4422 4421			Total OOS+RSC/PICC _____			4571 H 64665			4576			<6 (02) <6 (27)								
B _____			CPs in direct care _____			I 64666			4581			<6 (03) <6 (28)								
B _____			HPPD= <span style="border: 1px dashed black; display: inline-block; width: 40px; height: 20px; vertical-align: middle;"></span>			4586			4582			<6 (04) <6 (29)								
B _____			Max goals: _____			4585			4583			<6 (05) <6 (30)								
B _____			Days=6.6 Nights=6.5			4584			4584			<6 (06) <6 (31)								
B _____			Weekends day/night=6.4			Orientation Info			4583			<6 (07) <6 (32)								
B _____			RF 1 _____ OT & Above FTE _____			4584			4583			<6 (08) <6 (33)								
S-CN _____			RF 2 _____			4585			4582			<6 (09) <6 (34)								
S-BU _____			RF 3 _____			4584			4583			<6 (10) <6 (35)								
S* <input type="checkbox"/> _____			OC 1 _____			4584			4583			<6 (11) <6 (36)								
S* <input type="checkbox"/> _____			OC 2 _____			Orientation Info			4583			<6 (12) <6 (37)								
S _____			OC 3 _____			4584			4583			<6 (13) <6 (38)								
S _____			OC 4 _____			Orientation Info			4583			<6 (14) <6 (39)								
S _____			OC 5 _____			Orientation Info			4583			<6 (15) <6 (40)								
S _____			MR _____ CP _____			Orientation Info			4583			<6 (16) <6 (41)								
S _____			MR _____ CP _____			Orientation Info			4583			<6 (17) <6 (42)								
S _____			MR _____ CP _____			Orientation Info			4583			<6 (18) <6 (43)								
S _____			MR _____ CP _____			Orientation Info			4583			<6 (19) <6 (44)								
S _____			MR _____ CP _____			Orientation Info			4583			<6 (20) <6 (45)								
S _____			MR _____ CP _____			Orientation Info			4583			<6 (21) <6 (46)								
S _____			MR _____ CP _____			Orientation Info			4583			<6 (22) <6 (47)								
S _____			MR _____ CP _____			Orientation Info			4583			<6 (23) <6 (48)								
S _____			MR _____ CP _____			Orientation Info			4583			<6 (24) <6 (49)								
S _____			MR _____ CP _____			Orientation Info			4583			<6 (25) <6 (50)								

SL OOS: \_\_\_\_\_

RSC/PICC: \_\_\_\_\_

VCH: \_\_\_\_\_

A/J: \_\_\_\_\_

VUH: \_\_\_\_\_

Total RNs= \_\_\_\_\_

subtract - \_\_\_\_\_

SL OOS+RSC/PICC \_\_\_\_\_

Total Assignments= \_\_\_\_\_

CPs in direct care= \_\_\_\_\_

HPPD=

Max goals: \_\_\_\_\_

Days=6.6 Nights=6.5

Weekends day/night=6.4

# Data Collection

Electronic end of shift reporting tool

- SL name / shift
- Start / End NICU census
- RNs utilized
- Safety concerns / incident reports
- HPPD / Variance (if any)
- Email notification



# Next Steps

## Educated SLs

- Educated on the “why”
- Explained budget targets and tracking tools
  - Acuity
  - Variance reporting
- Equated savings to unit needs
- Conducted case scenarios to flex staffing

**One** extra RN 12 hour shift **per week** at overtime rate will add an average of **\$39,000** to the unit's annual labor expenses



# Unit needs that could have been purchased

1 Giraffe Bed = \$40,000

OR

4 NeoBlue bili lights = \$18,800

4 bassinets = \$9,600

1 transcutaneous bilimeter = \$6,300

2 portable scales = \$4,800

# Next Steps

## NICU staff meeting

- Educated on the “why”
- Equated savings to unit needs
- Compared hospital budget to personal budget

## Initial Results

- At 6 months
  - HPPD targets met 76% of the time
  - Estimated savings ***\$540,000***
- Patient care impact
  - **NO** increase in readmissions or safety events

# Final Results

- At 12 months
  - HPPD targets met 93% of the time
  - Estimated savings ***over a million dollars***
- Patient care impact
  - **NO** increase in readmissions or safety events

# Success

## Nursing Dashboard - NICU

DAY OF WEEK - PRODUCTIVITY - Nursery ICU (NICU)							
	● Week 1				● Week 2		
	05/22 SUN	05/23 MON	05/24 TUE	05/25 WED	05/26 THUR	05/27 FRI	05/28 SAT
Actual Direct Hrs	1,061.5	1,112.5	1,159.2	1,084.5	1,062.7	1,056.7	1,089.1
Patient Volume	86	89	89	86	85	86	87
Direct Hrs PPD	12.3	12.5	13.0	12.6	12.5	12.3	12.5
Budget Direct Hrs PPD	12.9	13.3	13.3	13.2	13.3	13.3	12.9
Variance	0.6 ●	0.8 ●	0.3 ●	0.6 ●	0.8 ●	1.0 ●	0.4 ●

## Lessons Learned

- *Cost and Quality* **NOT** *Cost versus Quality*
- Include all levels of unit leadership
- Share the “why” and highlight “what’s in it for me?”
- Provide the tools

# Lessons Learned

- Hold individuals accountable
- Track data in real-time and coach in the moment
- Share the wins
- Sustainment requires including HPPD in new SL onboarding

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