



Podcast Show Notes

Making Sense of Dollars and Cents:

Finance, Budgeting, and Staffing Skills for Nurse Leaders

Before you take a seat at the healthcare leadership table, you'll need to be prepared with knowledge and skills that aren't typically taught in nursing school. In this series, you'll gain practical tips to help you develop - and showcase - your business acumen.

This CE course is relevant to nursing and advanced practice nursing professionals.

Episode 3 – Remedies for Workforce Woes, Part 3

Stop struggling with staffing! Listen to learn the need-to-know considerations and formulas to ensure appropriate staffing for your department's - and patients' - needs.

Guest

Pamela Hunt, MSN, RN, NEA-BC, FAAN

- Independent healthcare consultant specializing in productivity, quality, and safety, improved organizational performance, caregiver engagement, leadership competence, talent development, and team building
- Associate Faculty, Indiana University School of Nursing and Kelly School of Business
- Nursing Management Conference Chair for Wolters Kluwer in Philadelphia, Pennsylvania
- Former Vice President of Patient Care Services for Community Health Network, Community Hospital North in Indianapolis, Indiana

Host

Faith Roberts, MSN, RN

- **Former Executive Director of Spiritual Care and Environmental Services for Carle Health in Urbana, Illinois**
- **Former Executive Director of Magnet, Pathway to Excellence, Professional Practice, Pastoral Care, and Faith Community Nursing at Carle Foundation Hospital and Carle Physician Group in Urbana, Illinois**

Episode Key Points

UNITS OF SERVICE	
<ul style="list-style-type: none">▪ Med/Surg Unit▪ Surgery▪ OP Oncology▪ Laboratory▪ Dietary▪ ER▪ Maintenance▪ Pre-Surgical/OP	<ul style="list-style-type: none">▪ Patient Day▪ Major Procedures▪ Minor Procedures▪ Treatments▪ Lab: # of tests▪ Meals Served▪ Patient Visits▪ Work Orders▪ # of Pt. encounters

Department Variables

- **Number of patients**
- **Acuity: Levels of intensity of the patients for whom care is provided**
- **Contextual issues: Architecture and geography of the environment and technology**

Patient-Specific Physical and Psychosocial Considerations

- **Age and functional ability**
- **Communication skills**
- **Cultural and linguistic diversity**
- **Severity and urgency of admitting condition**
- **Scheduled procedures**
- **Availability of social supports**

Unit Functions

- **Unit governance**

- Caregiver involvement in quality activities
- Evaluation of practice outcomes
- Supportive functions the unit may support

Staff-Related Considerations

- Experience with the population served
- Education and preparation/certification
- Tenure on the unit
- Level of control of the practice environment
- Number of competencies

Organization-Related Considerations

- Effective and efficient support services
- Transport, clerical, housekeeping, laboratory
- Access to timely, accurate, relevant information
- Technology

Case Study

STEP 1: FTE COMPUTATION

ADC x HPPD = 24-hour needs
ADC = 20 patients/day
HPPD = 9.15 (Budgeted target)

20 x 9.15 = 183 nursing hours per 24
hour period needed

STEP 2: SHIFTS PER 24 HOURS

24 hr needs/productive hours per shift

183/ 8 = 22.9 8-hour shifts

OR

183/12 = 15.3 12-hour shifts

HOW DOES THIS RELATE TO FTE?

8-hour example:

183 hrs/day x 5 days/wk
= 915 hrs
915 hrs divided by 40
hrs per week/FTE
= 22.9 FTE

12-hour example:

183 hrs/day x 3 days/wk
= 549 hrs
549 hrs divided by 36
hrs/week
= 15.3 FTE

STEP 3A: ALLOCATE FTE'S TO SHIFTS BY SKILL MIX

22.9 FTE – (1.0) Nonclinical staff = 21.9 FTE

	%	<u>Non clinical</u>	RN 50%	NA 40%	UC 10%
D	45	.34			
E	35	.33			
N	20	.33			
Totals					21.9

STEP 3A: ALLOCATE FTE'S TO SHIFTS BY SKILL MIX

22.9 FTE – (1.0) Nonclinical staff = 21.9 FTE

	%	<u>Non clinical</u>	RN 50%	NA 40%	UC 10%
D (9.8)	45	.34	4.9	3.9	1.0
E (7.7)	35	.33	3.8	3.1	.8
N (4.4)	20	.33	2.2	1.8	.4
Totals		1.0	10.90	8.8	2.2

STEP 3A: MAKE ANY ADJUSTMENTS NEEDED

22.9 FTE – (1.0) Nonclinical staff = 21.9 FTE

	<u>Non Clinical</u>	RN 50%	NA 40%	UC 10%	
D	.34	4.9	3.9	1.0	
E	.33	3.8	3.1	1.0	
N	.33	2.4	1.8	0	
Total	1.0	11.1	8.8	2.0	22.9

STEP 4: CONSIDER NUMBER OF DAYS TO STAFF

FTE needed \times hours worked per day \times days to staff
40 hours per week for an FTE

Example:

8-hour shifts:

4.9 FTE RN needed on days \times 8 hours \times 7 days to staff
=6.86

40 hours per week for an FTE

(4.9 \times 1.4 = 6.86 FTE)

**STEP 3B: MAKE ANY ADJUSTMENTS
NEEDED**

22.9 FTE – (1.0) Nonclinical staff = 21.9 FTE

	<u>Non Clinical</u>	RN 50%	NA 40%	UC 10%	
D	1.0	4.9	3.9	1.0	
E		3.8	3.1	1.0	
N		2.4	1.8	0	
Totals	1.0	11.1	8.8	2.1	22.9

**STEP 4: CONSIDERATION FOR NUMBER
OF DAYS TO STAFF**

	<u>Non Clinical</u>	RN 50%	NA 40%	UC 10%	
D	1.0	6.9	5.5	1.4	
E		5.3	4.3	1.4	
N		3.4	2.5	0	
Totals	1.0	15.6	12.3	2.8	31.7

**PRODUCTIVE VS. NON-PRODUCTIVE
HOURS**

Productive = Hours worked

Non-Productive =

Vacation	Funeral
Sick	Jury Duty
Holidays	Education

NON-PRODUCTIVE HOURS

An example of what these hours might be:
12-month totals for one department:

Vacation	2664 hours
Sick	2480 hours
Holidays	1984 hours
Funeral	100 hours
Jury Duty	50 hours
Education	1509 hours
Total Hours	8787

PTO Model Non-Productive Hours

24-hour needs/productive hours per shift

PTO per year 8,787

FTE 31.7 -1.0 Non-Clinical FTE

$\frac{8,787}{30.7} = 286$ hours/FTE average nonproductive
time per FTE per year

Calculating FTE Loss From Non-Productive Hours

2080 Annual hours for 1 FTE

-286 Hours of non-productive time

1794 Hours available for productive time

$286 / 2080 = 14\%$ lost time

$30.7 \text{ FTE} + 14\% = 35 + 1.0 = \underline{36 \text{ FTE needed}}$

**PREVIOUS CALCULATED NEED
24 HR 7 DAYS/WEEK**

	<u>Non Clinical</u>	RN 50%	NA 40%	UC 10%	
D	1.0	6.9	5.5	1.4	
E		5.3	4.3	1.4	
N		3.4	2.5	0	
Totals	1.0	15.6	12.3	2.8	31.7

**STEP 5: ADD % FOR NON-
PRODUCTIVE TIME**

	%	Non- Clinical	RN 50%	NA 40%	UC 10%	
D		1.0	7.9	6.3	1.6	
E			6.0	4.9	1.6	
N			3.9	2.8	0	
Totals		1.0	17.8	14	3.2	36

Practice Examples for Nursing Staffing

1. Example Unit

- ADC = 30
- NHPPD = 9.5
- 12-hour shifts

CALCULATE 24 HOUR NEEDS AND NUMBER OF SHIFTS

Step 1: FTE Computation

Step 2: Shifts per 24 hours

Step 3:

Days	60%		RN:	60%
Nights	40%		NA:	30%
			UC:	10%

(1.0 Manager)

CALCULATE 24 HOUR NEEDS AND NUMBER OF SHIFTS

Step 1: FTE Computation

$30 \times 9.5 = 285$ nursing hours needed in 24 hours

Step 2:

$285/12 = 23.8$ (12-hour shifts)

Step 3:

Days	60%		RN:	60%
Nights	40%		NA:	30%
			UC:	10%

STEP 3A: ALLOCATE FTE'S TO SHIFTS BY SKILL MIX

	%	Non-Clinical	RN 60%	NA 30%	UC 10%
Days	60				
Noc	40				
Totals					

ALLOCATE FTE'S TO SHIFTS BY SKILL MIX

23.8-1.0= 22.8 12-HOUR SHIFTS

	%	Non-Clinical	RN 60%	NA 30%	UC 10%
Day (13.7)	60	.5	8.2	4.1	1.4
<u>Noc</u> (9.1)	40	.5	5.5	2.7	0.9
Totals		1	13.7	6.8	2.3

Total FTE= 23.8 FTE

STEP 3B: MAKE ANY ADJUSTMENTS NEEDED

	%	Non Clinical	RN 60%	NA 30%	UC 10%
Day (13.7)	60	.5	8.2	4.1	1.4
<u>Noc</u> (9.1)	40	.5	5.5	2.7	0.9
Totals		1	13.7	6.8	2.3

Total FTE= 23.8 FTE

STEP 3B: MAKE ANY ADJUSTMENTS NEEDED

	%	Non Clinical	RN 60%	NA 30%	UC 10%
Day (13.7)	60	.5	8.2	4.1	1.4
<u>Noc</u> (9.1)	40	.5	6.4	2.7	0
Totals		1	14.6	6.8	1.4

Total FTE= 23.8 FTE

2. Staffing Example

- Calculate staffing for 7-days-per-week coverage and nonproductive hours.
- PTO hours for the department in the previous year were 13,480.

STEP 4: CONSIDER NUMBER OF DAYS TO STAFF

FTE needed on each shift for each job class x hrs worked per day x days to staff

Divided by

40 hours per week per FTE

STAFFING PLAN AFTER ADJUSTMENTS IS:

	%	Non Clinical	RN 60%	NA 30%	UC 10%
D 13.7	60	.5	8.2	4.1	1.4
N 9.1	40	.5	6.4	2.7	0
Totals		1	14.6	6.8	1.4

Total FTE= 23.8 FTE

STEP 4: CONSIDER DAYS TO STAFF:

23.8 FTE 12-hour shifts

	%	Non Clinical	RN 60%	NA 30%	UC 10%
D (13.7)	60	.5			
N (9.1)	40	.5			
Totals		1			

STEP 4: CONSIDER DAYS TO STAFF:

23.8 FTE 12-hour shifts

	%	Non Clinical	RN 60%	NA 30%	UC 10%
D	60	1.0	17.2	8.6	2.9
N	40		13.4	5.7	0
Totals		1.0	30.6	14.3	2.9

Total FTE = 48.8 FTE

Non-Productive Hours

PTO per year 13,480

Clinical FTE 47.8

$$\frac{13,480}{47.8} = \text{___} \text{ hours / FTE}$$

Non-Productive Hours

PTO per year 13,480

Clinical FTE 47.8

$$\frac{13,480}{47.8} = 282 \text{ hours predicted loss / FTE}$$

Calculating FTE Loss From Non-Productive Hours

2080	Annual hours for 1 FTE
- 282	Hours of non-productive time
_____	Hours available for productive time

$$282 / 2080 = \text{___} \% \text{ lost time}$$

$$\text{___ FTE} + \text{___} \% = \text{___} \text{ FTE needed}$$

Calculating FTE Loss From Non-Productive Hours

2080	Annual hours for 1 FTE
- 282	Hours of non-productive time
1798	Hours available for productive time

$$282 / 2080 = \underline{14} \% \text{ lost time}$$

$$\underline{47.8} \text{ FTE} + \underline{14} \% = \underline{54.5} + 1.0 \text{ manager}$$

Total FTE need of 55.5

**PREVIOUS CALCULATED NEED
24 HR 7 DAYS / WEEK**

23.8 FTE 12-hour shifts

	%	Non Clinical	RN 60%	NA 30%	UC 10%
D	60	1.0	17.2	8.6	2.9
N	40		13.4	5.7	0
Totals		1.0	30.6	14.3	2.9

Total FTE = 48.8 FTE

**STEP 5: ADD % FOR
NON- PRODUCTIVE TIME**

	%	Non Clinical	RN 60%	NA 30%	UC 10%
D	60	1.0			
N	40				
Totals		1.0			

Total FTE = 55.5 FTE

Scheduling Musts

- Ensure everyone is working their benefited hours.
- Ensure a balanced schedule is produced.
 - Example:
 - Core is six per shift.
 - Don't allow eight scheduled on one day and four on another.
- Ensure a schedule with no holes before the start of the schedule.
- Always explain the "why" to the team for this structured approach.

What Could Be Done Better?

- Core number for day shift: 14
- It's Friday and census is high. You need 16 to cover patient need.
- Scheduled number of staff on is 11 (five short).
- Number of staff scheduled for that week:
 - Monday: 12

- Tuesday: 16
- Wednesday: 17
- Thursday: 14
- Friday: 11

Removing Waste

- Ensure appropriate supplies in the rooms.
- Ensure appropriate equipment in the rooms, including areas sufficient for charting and preparing medications.
- Determine who stocks supplies.
- Get creative. Example: Some units have constructed coffee and water stations so that visitors can access their own refreshments.

Process Improvements

- Rework
- Hunting and gathering
- Distance traveled
- Additional handling
- Communication made easy
- Charging/ordering processes

Lessons for the Leader

- Many factors influence why your department is different from another. Analyze the differences closely when trying to benchmark and when determining a model of care that is right for your patient population.
- Skill mix is very important and needs to match the needs of the patient. Cost should be considered; however, cost should be secondary to the needs of the patient.
- Even if you are not allowed to hire for nonproductive time, know what this loss is for your department. It will be valuable information when justifying productivity variances.

Staffing Surgical and Outpatient Departments

Perioperative Staffing Should Be Based On:

- Individual patient needs
- Patient acuity
- Technological demands
- Staff member competency
- Skills mix
- Practice standards
- Healthcare regulations
- Accreditation requirements

- State staffing laws

MEAN/MEDIAN/MODE

Census	Frequency	Overstaffed	Understaffed
Mean-2420 (average)	3 days	6 days	11 days
Median-2500 (data point in the middle of the data points)	3 days	9 days	8 days
Mode-2800 (most frequently occurring)	4 days	15 days	1 day

Step 1: Surgical FTE Computation: Clinical Staff

The Equation:

of OR x # of Hours Room is available or utilized x
Average # of Paid Staff

The Example:

2 Rms x 8 hours x 3.5 staff = 56 hours
 2 Rms x 10 hours x 3.5 staff = 70 hours
 Total 126 hours

Step 2: Calculate Productive Hours

56 hours / 8 hours per shift = 7.0 FTE needed

70 hours / 10 hours per shift = 7.0 FTE needed

7.0 + 7.0 = 14 clinical FTE needed per day

How does this relate to FTE?

8-hour shift example:

$$56 \text{ hrs/day} \times 5 \text{ days/wk} = 280 \text{ hrs}$$

$$280 \text{ hrs divided by } 40 \text{ hrs per week/FTE} = 7 \text{ FTE}$$

10-hour shift example:

$$70 \text{ hrs/day} \times 4 \text{ days/wk} = 280 \text{ hrs}$$

$$280 \text{ hrs divided by } 40 \text{ hrs/week} = 7 \text{ FTE}$$

Step 3: Allocate FTE to Shifts and Skill Mix

Starting with 14.0 Clinical FTE Need:

	%	RN 50%	CST 30%	UP 20%	
8 hr (7.0)	50	3.5	2.1	1.4	
10 hr (7.0)	50	3.5	2.1	1.4	
Totals		7.0	4.2	2.8	14.0

Step 3b: Allocate FTE to Shifts and Skill Mix

Starting with 14.0 Clinical FTE Need:

	%	RN 50%	CST 30%	UP 20%	
8 hr (7.0)	50	3.5	2.1	1.4	
10 hr (7.0)	50	3.5	2.1	1.4	
Totals		7.0	4.2	2.8	14.0

Step 3: Make any adjustments needed

Starting with 14.0 Clinical FTE Need:

		RN 50%	CST 30%	UP 20%	
8 hr (7.0)		3.5	2.1	2.8	
10 hr (7.0)		3.5	2.1	0	
Totals		7.0	4.2	2.8	14.0

Step 4: Consider Number of Days to Staff

$\# \text{ FTE needed} \times \text{hours worked per day} \times \text{days to staff}$
40 hours per week per FTE

Example:

10-hour shifts:

$\frac{3.5 \text{ FTE} \times 10 \text{ hours} \times 5 \text{ days to staff}}{40 \text{ hours per week per FTE}} = 4.37 \text{ FTE}$

Step 4: Consider the Number of Days to Staff

Starting with 14.0 Clinical FTE Need:

		RN	CST	UP
8 hr	6days/wk	4.2	2.5	3.36
10 hr	5days/wk	4.4	2.6	0
Totals		8.6	5.1	3.36
Clinical FTE need				17.06

AORN Position Statement Method

2 rooms x 8 hours x 6 days = 96 hrs.

2 rooms x 10 hours x 5 days = 100 hrs.
196 hrs.

196 hrs. x 3.5 staff per room = 686 hrs./wk
686/40 hours per week = 17.2 FTE

Fixed vs. Flexible Staffing

- **Fixed**
 - **Not dependent on census**
- **Flexible**
 - **Need is dependent on census**
 - **Floating**
 - **Work list**
 - **Low census time**

Staffing for Nonclinical Functions

- **Director**
- **Clinical Manager**
- **Scheduler**
- **Instrument Processing**
- **Housekeeping**
- **Inventory Clerk**
- **Educator**

Step 5: Add Fixed and Non-Clinical Job Classes

Job Class	FTE Needed
Director	.5
Charge RN	1.0
Scheduler	1.0
Inventory	1.0
Housekeeper	1.0
RN	8.6
CST	5.1
NA	3.36
Total	21.56

Productive and Non-Productive Hours

Productive Hours	Non-Productive Hours
Hours worked	Vacation
	Sick
	Holidays
	Funeral
	Jury Duty
	Education
	Military Duty

PTO Model Non-Productive Hours

PTO per year	5017
FTE	$21.56 - 0.5 = 21.06$

$5017 / 21.06 = 233$ hours per FTE predicted loss time per year

Calculating FTE Loss From Non-Productive Hours

2080 Annual hours for 1 FTE
-238 Hours of non-productive time
1842 Hours available for productive time
238/2080 = 11% lost time

$21.06 \text{ FTE} + 11\% = 23.38 + 0.5 \text{ Director} = 23.87 \text{ FTE}$

Step 5: Add Fixed and Non-Clinical Job Classes

Job Class	FTE Needed
Director	.5
Charge RN	1.0
Scheduler	1.0
Inventory	1.0
Housekeeper	1.0
RN	8.6
CST	5.1
NA	3.36
Total	21.56

Step 5: Add Fixed and Non-Clinical Job Classes

Job Class	FTE Need	Non-Productive	Total FTE
Director	.5		.5
Clinical Manager	1.0	11%	1.1
Scheduler	1.0	11%	1.1
Inventory	1.0	11%	1.1
Housekeeper	1.0	11%	1.1
RN	8.6	11%	9.5
CST	5.1	11%	5.7
UP	3.36	11%	3.7
Total	21.56	Total	23.9

Consideration for Lunch Relief

Example Day Staffing Pattern:

The Equation:

of circulators X 7 minutes for hand off = # minutes /60 min/hour

of scrubs X 15 minutes for handoff= # min/60 min/hour

The Example: 4 Room OR

Circulators: 4 RN x 7 minutes = 28 minutes/60 = .46 hours

Scrubs: 8 scrub x 15 min = 120 minutes/60 = 2 hours

Total handoff time is 2.46 hours per day

2.46 hours per day x 10 days per pay = 24.6 hours per pay

24.6 hours per pay/80 hours per FTE = .31 FTE additional needed.

(.06 RN and .25 Scrub)

Consideration for Post-Call Relief

Calculating Call Replacement

The Equation:

of call days X # of hrs on call X # of caregivers on call

Example:

254 days x 16 hours weekday call x 2 caregivers = 8,128 hrs

(5 days/week x 52 weeks – 6 holidays = 254 days)

52 weekends x 48 hours call/weekend x 2 people = 4,992 hrs

6 holidays X 24 hrs/call x 2 people = 288 hrs

Total call hours = 13,408 hours

Call (continued)

It's important to know call hours worked historically

Example:

4,692 worked call hours divided by 13,408 possible call hours =
35% call hours are worked.

4,692 worked call hours divided by 2080 hours/FTE/year = 2.25 FTE

Outpatient Clinic Practice Environments

- **Step 1**
 - **Measurement of work: HPPV (hours-per-patient visit), including rooming, assessment and care in the room, and follow-up needed outside the room**
 - **May want to observe based on different levels of care**
 - **How many staff needed?**
 - **Average number of patients x HPPV = hours needed for the day**
 - **May be different by day of the week**
- **Step 2**
 - **Take hours per day needed/8 hours, which will give you the number of shifts per day needed.**
- **Step 3**

- Determine how many hours per day needed are covered.
- Step 4
 - Add staffing for nonclinical functions

Actions

- Access your model of care; explore what job roles are needed and available to care for your patients.
- Know how many FTEs of each role you need to staff your unit.
- Know how many FTEs you currently have and what the gap is from “have” to “need.” This is the true vacancy.

References

- Fox, E. R. (2020). Budgeting in the time of Covid-19. *American Journal of Health-System Pharmacy*, 77(15), 1174–1175. <https://doi.org/10.1093/ajhp/zxaa185>
- Hill, K., Higdon, K., Porter, B., Rutland, B., & Vela, D. (2016). Preserving staffing resources as a system: Nurses leading operations and efficiency initiatives. *Nursing Economics*, 33(1), 26-35.
- Hunt, P. (2018). Developing a staffing plan to meet inpatient unit needs. *Nursing Management*, 49(5), 25-31.
- Hunt, P., & Hartman, D. (2018). Meeting the measurements of inpatient staffing productivity. *Nursing Management*, 49(6), 27-33.
- Jones, C., Finkler, S., Kovner, C., & Mose, J. (2019). *Financial management for nurse managers and executives*. Elsevier.
- Malloch, K. (2016). Measurement of nursing’s complex health care work: Evolution of the science for determining the required staffing for safe and effective patient care. *Nursing Economics*, 33(1), 20-25.
- Stöß, C., Steffani, M., Kohlhaw, K., Rudroff, C., Staib, L., Hartmann, D., Friess, H., & Müller, M. W. (2020). The COVID-19 pandemic: Impact on surgical departments of non-university hospitals. *BMC Surgery*, 20(1). <https://doi.org/10.1186/s12893-020-00970-x>
- Tempero, M. (2020). Lasting effects of Covid-19: Reimbursement reform? *Journal of the National Comprehensive Cancer Network*, 18(11), 1435. <https://doi.org/10.6004/jnccn.2020.0054>
- Ward, W. (2016). *Health care budgeting and financial management*. Praeger.
- Welton, J., & Harper, E. (2016). Nursing care value-based financial models. *Nursing Economics*, 33(1), 14-19.

Resources

[2021 NSI National Health Care Retention & RN Staffing Report](#)

[Agency for Healthcare Research and Quality](#)

[American Association of PeriOperative Registered Nurses](#)

© 2022 Elite Learning. All Rights Reserved.