**Number crunching with variable budgets**
Margaret Piltz Kirkby
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# Number crunching with variable budgets

*Strike a balance between revenue and expenses to protect patients and your financial bottom line.*

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CE 1.5 ANCC/AACN CONTACT HOURS

By Margaret Piltz Kirkby, RN, MS

Abstract: Variable budgeting allows managers to support a resource management plan that provides for efficient staffing and patient care. [Nurs Manage 2003:34(3):28-34]

A health care organization's financial performance and productivity reports can startle even the most astute manager. The next time you're staring with disbelief at figures that don't seem to add up, keep in mind that the data directly reflects operational decision-making. And although it may seem so, the numbers didn't invent themselves. Someone did—or didn't—do something that shows up in the budget. A firmer understanding of the following key relationships will help boost your departments' care provision, operational performances, and financial health.

Michael Trinsey



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### Creating the budget

Successful departmental budgets support a resource management plan (RMP)—a structured approach to the process of identifying and allocating unit-based personnel resources in the most effective and efficient manner.[1] To support an RMP when building a budget, focus on stabilizing unit core staffing. View your budget as the long-range plan for how you'll allocate resources throughout the year. Planning for all foreseeable departmental needs during the budget year provides a strong foundation for resource deployment. Stable unit core staffing translates into low reliance on supplemental resources, which often reduce operational efficiency and quality patient care, and can prove to be expensive and difficult to find.

*When monitoring a variable budget, note how revenue and expenses fluctuate with volume. Rather than measuring static numbers, such as budgeted FTEs or dollars, evaluate these numbers within the context of census variations.*

To develop a comprehensive variable budget, take the following steps:

♦ *establish a care standard.* Most hospitals use hours per patient day (HPPD), which is essentially a contract with the community that your hospital serves because it indicates the level of care they will receive when they're patients. Specifically, HPPD represents how many care hours you provide during a 24-hour day. For example, the mid-point for care hours in an adult medical/surgical unit is 7.4. The mid-point for care hours in the intensive care unit is 16.[2] It's important to separate direct caregiving hours (RN, aide) from indirect hours (manager, clerk). The direct caregiver HPPD should remain constant, even as census varies, so as to maintain the care standard promised to the community. Base HPPD targets on national benchmarks for each type of care unit in your hospital.

♦ *determine each department's expected census.* This should be a carefully reasoned estimate. Measure, study, and apply past census patterns to the current year. Ideally, you'd budget each department for 85% occupancy. It's better to have a small number of full departments than several fairly empty ones. Predictability and stable staffing remain your goals. The less your census flexes up and down, the more efficient your resource management remains. Make your budgeted average daily census one that your departments will comfortably maintain the majority of the time.

♦ *apply HPPD to census, then determine full-time equivalents (FTEs).* Calculate the necessary number of FTEs to yield the desired care standard to the expected number of patients in each department. For example, a med/surg unit with 32 patients requires 236.8 care hours in 24 hours (32 multiplied by 7.4 HPPD equals 236.8.) Then, divide by 8 hours per FTE/day to arrive at 29.6 FTEs. Use this number as your starting point for determining the total FTEs required to meet the daily staffing model. Note that it doesn't account for benefit time, staffing deficits, or high census.

♦ *calculate the amount of FTEs needed to replace staff members when they use benefit time.* Although you include benefit time in the hours paid to each FTE, you obviously must replace that person on the unit when he or she isn't there. The usual strategies include usage of part-time staff, overtime, float pools, or agencies. You must include the cost of these elements in the budget or one of two things will happen: The department won't deliver the desired care standard to the community or the department will be over budget due to the use of these supplemental staffing measures. To calculate the FTEs needed for replacement of benefit time, determine the

### Budgeting best practices

- Clearly differentiate direct, worked, paid FTEs, and hours per unit of service (such as patient day).
- Establish universal definitions/use categories within direct and indirect categories, including multifunctional workers.
- Identify nonproductive time and orientation time within the budget. Create a clear plan for overtime.
- Demonstrate a firm understanding of the impact of incentives, premium pay, bonuses, sitters or constant companions, and other premium strategies.
- Implement a variable staffing plan for each patient care unit. Ensure that the plan doesn't exceed budgeted care hours and dollars.





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percent of paid time that's not worked (vacation, sick, holiday, continuing education classes) according to human resource policies, then add that percent of additional FTEs. (Usually 10% to 15% additional is needed for benefit replacement.) For example, an FTE works 260 shifts per year (2,080 hours per 8-hour shift). If he or she takes 3 weeks off for vacation, 1 week off for sick leave, 3 holidays, and 2 workshop days, he or she really only works 235 shifts per year (90% of his or her paid time). Add 10% more to the budget for each department to replace the use of this benefit time.

♦ *design a hiring template for full-time and part-time positions of each unit.* Calculate the ideal complement of positions, using the precise number of positions and the FTE of each position as guidance. If you keep these exact positions filled, you'll stabilize the unit core staffing and minimize costs while delivering quality patient care. If, on the other hand, you hire all of the budgeted FTEs into mostly full-time staff, your unit may come up short every weekend.

♦ *plan for the float pool's cost.* The department's focus is to stabilize unit core staffing; the float pool's focus is to supplement the department. Ideally, determine budget considerations for the float pool by measuring common deficits experienced by the departments. The primary deficits to measure are those that occur at the last minute, including sick calls, leaves of absence, and higher-than-budgeted census. Leaves of absence (LOA) can create huge deficits because they're long and not permanently replaced. Include in the budget the dollars to pay for the LOA itself and all replacement shifts. Also, specifically measure and plan for patient volume fluctuations. Keep in mind that as patient volume goes up, you'll need additional staff shifts and dollars to pay them, which usually come from the excess revenue generated from additional patients.

♦ *plan for any special programs.* For staff, these might include weekend-only work, incentive bonuses, and recruitment or retention pay-outs. For patients, these might involve the offering of constant companions (sitters) for a restraint-free environment. Carefully assess these possibilities and allow room in the budget for their provision.

### Monitoring the budget

When monitoring a variable budget, note how revenue and expenses fluctuate with volume. Rather than measuring static numbers, such as budgeted FTEs or dollars, evaluate these numbers within the context of census variations. As volume increases, so does the need for more staff members—and the need for allocated funds to pay them. Fortunately, as previously mentioned, the revenue generated by the additional patients usually covers these additional costs. If you use FTE reports, adjust them for volume. Remember, FTEs should flex with patient volume. Don't try to control FTE performance to control the budget—this leads to reduced care standards.

Ratios remain solid performance indicators: FTEs and dollars vary with volume but stay constant compared to patient days. But you must maintain the HPPD care standard regardless of volume. It's unethical to make margin by not increasing staffing levels when the census increases. Staffing should flex up when volume goes up and flex down when volume goes down to keep hours per patient day and dollars per patient day constant.

**Remember...**

**FTEs flex with patient volume...**

**Dollars flex with patient volume...**

**Revenues flex with patient volume...**

**HPPD remains constant with patient volume.**

**Go-to guidelines**

♦ If you're using a float pool to respond to a portion of open unit positions, do so with caution to avoid depleting the shifts available for defects such as sick time, leaves of absence, and high census. If you use the float pool to cover open positions, keep the percentage small.

♦ Budget and hire FTEs to replace used benefit time so that the unit's core staffing remains stable. Keep in mind that if you have numerous open positions, you'll find replacing benefit shifts difficult and expensive.

♦ Consider overfilling all budgeted positions when anticipating periods of high staff turnover or high census. If you know of pending terminations or leaves of absence, promptly post these positions. Watch for patterns and post positions in anticipation of short-staffing periods. For example, if your census patterns show a rise in the winter, increase hiring in the fall.



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Remain accountable for productive hours within your cost centers, including direct and indirect caregiver hours. Flex staff up and down as census varies, using a variable staffing model designed to maintain the HPPD care standard at every census level. It's more difficult to flex indirect caregivers since they're often fixed costs. Also remain accountable for the nonproductive budget, recognizing that justifiable variances may exist. For example, if you give paid time off on low census days to flex staffing down, your unit will appropriately exceed the nonproductive budget for those pay periods. Because there are so many financial indicators, data from one source often doesn't match data from another source. Rather than deeming all of the data equally important, it's best to pick a few key indicators to monitor. It's also wise to choose common definitions of what goes into each monitor.

*Flex staff up and down as census varies, using a variable staffing model designed to maintain the HPPD care standard at every census level. It's more difficult to flex indirect caregivers since they're often fixed costs.*

For you to manage your departments effectively, your facility should provide as much accurate financial data as often as possible. If you receive this data in a timely fashion and you understand it, you can intervene much sooner if things begin to go wrong. Ideally, you should also report on vital financial indicators each pay period. Frequent monitoring of key unit variables, such as staffing deficits and response to them, allows you to understand potential impacts and to intervene promptly to improve operational performance. Important ratios to track include HPPD, dollars per patient day, and FTEs per patient day. (See "Budgeting best practices.")

**The vacancy factor**

It's essential that you keep all budgeted positions filled. After you complete your budget and are aware of your department's necessary number of unit FTEs, design a hiring template for full- and part-time positions to meet the staffing model every shift for your budgeted number of patients. Hire into those positions only, keeping every position filled at all times.

Caution: If, because you assume that there's always a certain percentage of open positions, you don't use your designated FTEs and the money allocated for them, you're inadvertently undermining the entire RMP. Whether regular staff fill the positions or not, you should ensure that the shifts are actually worked and the money actually spent. Adequate patient care requires using all of your budgeted FTEs, plus benefit replacement FTEs and dollars needed for special needs.

Every unfilled position creates numerous deficits. Because the goal of resource management planning is to stabilize unit core staffing, open positions weaken the foundation and threaten quality care delivery. Under-hiring leads to the use of higher-cost supplemental strategies such as overtime, float pool, and agencies. When you use these strategies for known needs in core unit staffing, you're left with fewer available supplemental resources to respond to common last-minute staffing deficits. If every extra shift goes to core staffing, there are no shifts available to respond to sick calls, leaves of absence, and higher-than-budgeted census.

Open positions, leaves of absence, sick calls, and high census challenge every shift, every week—but they're especially problematic on weekends and holidays. Response strategies employed during the week may prove less effective on weekends and holidays when it's difficult to entice staff to work more than their normal amount of time. That means, unless census drops, staffing deficits may cause care quality to suffer.

Weekend staffing is also challenging—even in the best of times. If you haven't hired into a template that provides for an adequate level of weekend coverage, or if you have open positions, you'll need to employ additional strategies. (See "Go-to guidelines.") Be careful when resorting to weekend-only programs or weekend bonuses. These methods are pricey, and in the end, produce the same number of shifts the department would've had if all positions were filled.

Chronic open positions often seriously impact unit schedules because staff members work long stretches, have frequent shift reassignment,



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take inadequate time off between shifts, and experience unequal distribution of undesirable shifts.[4] They often tire of working "short" and of not having enough coworkers to provide the type of care they can be proud of. Some may resign and seek a more professionally satisfying environment at another facility. Others may stay, growing more frustrated each shift and negatively impacting care delivery and the overall hospital environment.

Chronic open positions also can make managers and recruiters complacent. If nursing administrators don't view these open positions as problematic, they often won't put sufficient effort into recruitment and retention. It's more difficult to recruit to a department with chronic open positions because new staff members are reluctant to join a potentially troubled environment. They fear working shorthanded in such a unit, thinking that they won't receive support when needed.

In the past, hospitals would keep positions open as a money-saving strategy, believing that with managed care, inpatient census would decline. But for most hospitals, this hasn't happened—and, ironically, census is high, core staffing is low, and reliable, affordable supplemental help remains in short supply.

### Count on it!

If you're unpleasantly surprised each month when you review the financial reports, it's time to rework your budget. Start by creating a plan for everything that will happen or that's likely to happen. Your first step? Devise an effective RMP, which will promote efficient delivery of quality patient care. Then, bank on making resource decisions that support continuous stabilization of core unit staffing. After all, it's crunch time: Your patients' well-being and your departments' financial health depend on it. NM

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3. McKinley, J., and Cavouras, C.: "Evolving Staffing Measures," *Staffing Management and Methods: Tools and Techniques for Nursing Leaders.* San Francisco, Calif.: Jossey-Bass, 2000.
4. Ferguson, L.: *Scheduling: The Job Nobody Wants But Everybody Thinks They Can Do Better.* New Hope, Minn.: Wheatridge Press, 1997.



### About the author

**Margaret Piltz Kirkby** is an independent consultant specializing in workforce management. She's also a Clinical Analyst in Lexington, Va., and teaches on-line.



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C E **1.5** ANCC/AACN CONTACT HOURS

## NUMBER CRUNCHING WITH VARIABLE BUDGETS

**PURPOSE:** To provide registered professional nurses with an overview of how variable budgeting promotes efficient staffing and patient care.
**OBJECTIVES:** After reading the article and taking this test, you should be able to: **1.** List the steps to take in creating a comprehensive variable budget. **2.** Identify how to monitor a variable budget and the importance of keeping all budgeted positions filled.

**1. Which of the following best describes a Resource Management Plan (RMP)?**
1. a number of care hours provided during a 24-hour day
2. national benchmarks for each type of care unit in the hospital
3. the budgeted average daily census that's comfortably maintained the majority of the time
4. a structured approach to the process of identifying and allocating unit-based resources effectively and efficiently

**2. To support an RMP when building a budget, focus on stabilizing**
1. unit core staffing.
2. float pool positions.
3. vacant positions.
4. weekend staffing.

**3. Stable unit core staffing translates into**
1. low reliance on supplemental resources.
2. reduced operational efficiency.
3. decreased patient care quality.
4. unforeseeable expenses.

**4. View your budget as a long-range plan for how you'll allocate resources during the next**
1. 4 weeks. 3. 12 months.
2. 6 months. 4. 5 years.

**5. Which of the following is correct about hours per patient day (HPPD)?**
1. It's rarely used as a care standard.
2. It's important to group direct caregiving hours with indirect hours.
3. The direct caregiver HPPD should vary as census varies.
4. It represents the care standard promised to the community.

**6. The mid-point for care hours in an adult medical/surgical unit is**
1. 5.4. 3. 9.4.
2. 7.4. 4. 11.4.

**7. The midpoint for care hours in the intensive care unit is**
1. 8. 3. 12.
2. 10. 4. 16.

**8. Ideally, you'll budget each department for an occupancy rate of**
1. 65%. 3. 85%.
2. 75%. 4. 100%.

**9. Which of the following is correct about determining each department's expected census?**
1. It's better to have several fairly empty departments than a small number of full ones.
2. The goals are predictability and stable staffing.
3. The more the census flexes up and down, the more efficient your resource management remains.
4. The budgeted average daily census should be one that the department will maintain for an average of 4 months of the year.

**10. Calculating the necessary number of full-time employees (FTEs) to yield the desired care standard to the expected number of patients in each department accounts for**
1. benefit time.
2. staffing deficits.
3. high census.
4. basic daily staffing.

**11. To calculate benefit replacement time, add which of the following to each department's budget?**
1. 1-5% 3. 20-25%
2. 10-15% 4. 30-35%

**12. Which of the following is correct about a plan for the float pool costs?**
1. The focus is to stabilize unit core staffing.
2. Common primary deficits include a lower-than-budgeted census.
3. Leaves of absence have minimal impact on the budget.
4. The focus is to supplement the department.

**13. When monitoring a variable budget,**
1. measure static numbers.
2. measure budgeted FTEs.
3. measure dollars.
4. note how revenues and expenses fluctuate with volume.

**14. Which of the following is correct about calculating productive hours within a cost center?**
1. Include only direct caregiver hours.
2. It's easier to flex indirect caregivers.
3. Flex staff up and down as census varies.
4. Direct caregivers are often fixed costs.

**15. Unfilled positions**
1. are especially problematic on weekdays.
2. on weekends and holidays are effectively managed with response strategies employed during the week.
3. threaten quality care delivery.
4. should be addressed with weekend bonuses and weekend-only programs.

**16. Budgeting best practices includes**
1. ensuring that the variable staffing plan for each patient care unit exceeds budgeted care hours.
2. establishing unit-specific definitions within direct and indirect categories, excluding multifunctional workers.
3. excluding the impact of premium strategies, such as bonuses.
4. creating a clear plan for overtime.

**17. Which of the following remains constant with patient volume?**
1. FTEs. 3. revenues.
2. dollars. 4. HPPD.

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| | Disagree | | | Agree |
|---|---|---|---|---|
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| 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. |
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| 10. | 11. | 12. | 13. | 14. | 15. | 16. | 17. |
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