

A Phase 2 Consulting White Paper



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THE KEY TO BUDGET SUCCESS: Optimal Staffing and Scheduling Management

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OPTIMAL STAFFING AND SCHEDULING MANAGEMENT

ur third White Paper is focused on how to achieve labor and quality targets through the development of a successful staffing and scheduling procedure. This topic is a major issue facing many clinical and financial executives today. Clinical staffing and scheduling is one of the largest single factors of poor financial, productivity and quality performance. In the last seven years, when analyzing nursing clinical budgets nine out of ten systems are not within 1%-3% of a flex budget. More importantly, they are experiencing high turnover rates, burnout among care providers and rising sentinel events. The rationale is largely attributed to the nursing shortage. However, when analyzing the proposed staffing plans and models of care, the hours of care used are generally adequate, but the type of FTE and dollar variances exceed budget norms.

This White Paper outlines the Phase 2 Consulting methodology, addresses the trends in patient care, and provides our ten-step process of assuring that clinical satisfaction and finance objectives are achieved through successful implementation.

Methodology

Phase 2 Consulting analyzed the staffing and scheduling data of ten former clients. We evaluated their stated staffing plans and their congruency with budgets. We also assessed the clinical and financial results and overall satisfaction of the strategies used. In order to ensure all relevant data was incorporated within our analyses of staffing, scheduling and budget, we also gathered the following data:

- Proposed versus actual staffing
- Position control budget versus actual, including full time, part time, per-diem/pool hours and agency hours by category (RN, LPN, Nursing Assistants, etc.)
- Salaries and shift differential, by class
- Overtime percentage, by class (full time, part time and per-diem employees)

- Extra incentive bonuses above and beyond regular hours, by class
- Agency usage budget, by class, versus actual budget
- Turnover rates, by unit and class
- Vacancy rate trends, by unit and class
- Master scheduling patterns and holes, by unit
- Volume/utilization predictions, by day of the week and shift
- Nursing plans of care
- Outcomes (clinical, quality and financial)

Phase 2 Consulting initially obtained and used this raw data to achieve the improved financial and clinical outcomes now experienced by these ten healthcare systems.

Trends in Patient Care Services

In Phase 2 Consulting's initial assessment of the ten healthcare systems, we discovered five adverse "trending patterns" affecting patient care services today:

- 1. Missed Budgets: CFO complaints are on the rise regarding patient care services continuously missing budgets. When analyzing nursing clinical budgets, we found that nine out of ten systems are not within 1%-3% variance of their flex budget.
- 2. Rising Turnover Rates: Our clients' average turnover rate was increasing from 15% to 17-20%. One of the principal reasons for this increase is the rise in unwelcome overtime, which leads to burnout among care providers.
- 3. Medicare Length of Stay is Increasing Again: Many of our clients average .5-1 day above the Medicare average. Less than optimal staffing reduces the ability to move patients through the system in a timely manner.
- 4. Cost Shifting: Although there appears to be a reduction in agency costs, dollars paid in premiums (double OT bonuses) and orientation costs are increasing.

5. Chronic Recruitment and Retention Issues: The issue of supply and demand has always been cyclical in clinical services, however, the recovery period appears to be getting longer.

A good staffing and scheduling plan can and will alter these trends and allow appropriate staffing to improve financial and clinical performance. Phase 2 Consulting has identified three common themes contributing to the adverse patient care staffing and budget trends.

- Lack of patient care strategic planning
- Incomplete budget methodology
- Chronic crisis staffing and scheduling management

TEN Steps to Successful Staffing and Scheduling Outcomes

Phase 2 Consulting recommends the following action items to help organizations optimize staffing and budget effectively.

Take Time for Planning

Most organizations approach the budget process with little planning. Having a sound plan can help to reduce last minute changes, a common cause for budget failure.

Review the Master Patient Care Plan Annually

The Nursing Plan of Care is a document required by JCAHO (Table 1). This document is unique to each organization and specifies by unit the type of patient population, care delivery and staffing mix that your organization is committed to delivering. The Nursing Plan of Care should be a roadmap for patient placement and daily staffing, yet it often goes ignored.

Too often, the Nursing Plan of Care is not utilized when building daily staffing grids or the patient care budgets. This synergy is critical in assuring that patients

TABLE 1: EXAMPLE PLAN OF CARE

1001 – Specialty Unit

- Unit 1001 is a 12-bed post-cardiovascular surgery telemetry unit.
- Patients admitted include pre- and post-cardiac surgery patients and other chest surgeries. This unit also can be used as an overflow for other surgical patients.
- The nurse-to-patient ratio in this unit is 1 RN to every 2-3 patients.
- The capacity for this unit is 12 beds, while the average daily census is nine beds a current occupancy rate of 75%.

are cared for properly, unexpected co-morbidities are avoided, and budgeted targets are achieved.

We recommend the Nursing Plan of Care be reevaluated annually and analyzed against clinical, financial and satisfaction performance before budgeting begins, and then re-evaluated after the budget process is over to assure internal consistency and successful implementation.

Develop a Unit-Specific Staffing Plan

The next step is to develop a staffing grid based on the staffing model. The staffing model of care should be based upon three components: 1) nursing plan of care for each specified unit: 2) the projected utilization or ADC (average daily census): 3) the benchmark or target HPPD (hours per patient day). These three components must be analyzed and modified annually.

After the model of care has been agreed upon, historical patient day utilization can be trended over three years. The new ADC is projected from historical averages and future strategic expectations. Once the ADC is determined, each unit manager should input the data into the staffing grids based on the plan of care. The target productive HPPD is then determined from this input data. The manager will average the HPPD target at the budgeted ADC as well as 2 above and 2 below the target (see the highlighted area in Table 2), which will permit an accurate projection of the HPPD. Having this target average established allows budget accuracy when the daily census fluctuates. The final ADC, HPPD target, and staffing mix should then be reviewed with the finance department before moving to the next step.

The staffing grid information should be utilized to create additional information that will role-out the final budget. Staffing grids drive the final required FTE position count, the position control, and the labor dollar numbers. Accurate projections of FTEs and labor expenses make it simple for managers to complete a budget process and also assure internal consistency. The staffing grid (Table 2) should then be used as a guide for the frontline management to control the budgets of every shift.

TABLE 2	: EXAM	PLE OF	STAFFING	G GRID							
# CEN	NM Day \$35.00	Secretary Day \$12.00	Secretary Night \$13.00	F 12 Hr. Day \$28.00	N 12 Hr. Night \$29.00	CN 12 Hr. Day \$13.00	A/NA 12 Hr. Night \$14.00	Prod Hours	Prod Salary	Prod Hrs/ Pt Day	Prod Sal Exp/ Pt Day
12	1.00	1.00	1.00	4	4	1		140	\$3,472	11.7	\$289
11	1.00	1.00	1.00	4	4	1		140	\$3,472	12.7	\$316
10	1.00	1.00	1.00	4	4	1		140	\$3,472	14.0	\$347
9	1.00	1.00	1.00	4	4	1		140	\$3,472	15.6	\$386
8	1.00	1.00	1.00	4	4	1		140	\$3,472	17.5	\$434
7	1.00	1.00	1.00	3	3	1		116	\$2,788	16.6	\$398
6	1.00	1.00	1.00	3	3	1		116	\$2,788	19.3	\$465
5	1.00	1.00	1.00	3	3	1		116	\$2,788	23.2	\$558
4	1.00	1.00	1.00	2	2	1		92	\$2,104	23.0	\$526
3	1.00	1.00	1.00	2	2	1		92	\$2,104	30.7	\$701
2	1.00	1.00	1.00	2	2	1		92	\$2,104	46.0	\$1,052
1	1.00	1.00	1.00	2	2	1		92	\$2,104	92.0	\$2,104
Hours/Day	8.00	12.00	12.00	8.00	12	12	12	Dept. N	lum: 1001		
Days/Week	5	5	5	5	7	7	7	Dept. Name: Specialty Unit			
Days/Year	365	365	365	260	365	365	365	Manage	er:		ADC:
Total Hours	2,920	4,380	4,380	2,080	4,380	4,380	4,380	Hrs per	Shift: 12.0	AVG H	IPPD: 15.
								Patient	Days: 3,285	5 bas	ed on ADC

*The average HPPD: average of HPPD from an increase of 2 in the census down to a decrease of 2 in the census from the ADC

Create a True Flex Budget Methodology

Seven out of the ten hospitals studied lacked a clearly defined patient care budget methodology. Three frequent mistakes include the lack of budgeting premium dollars, mismanagement of agency dollars, and failure to reconcile the budget with the planning tools. One, or all, of these mistakes are often the cause of budget overages.

Determine the FTE Demands by Skill Mix Type

• Once the staffing grid is developed, the next step becomes easier because the skill mix worksheet is linked with information on the staffing grid. (Table 3). Each manager is required to verify the data on the worksheet in order to calculate the non-productive (or replacement) time and to ensure the proper FTE complement (full-time (FT), part-time (PT) and prn or agency staff) is budgeted and agreed upon.

First, the manager must confirm that the correct data is used to build the staffing grid. This data needs to include the ADC, HPPD, and the number of staff required 24 hours a day and 365 days a year. A correct staffing grid will identify the proper number of productive FTEs.

Next, the non-productive time, as a percent of the total productive time, must be calculated and compared to the targeted non-productive percentage. The percentage is best determined when vacation, sick, education, and FMLA is assessed for historical utilization and then projected by employee. Finally, the percentage breakdown of FT, PT, and per-diem employees should be determined by the variation in census patterns for the specified unit. In general, if census patterns are found to not fluctuate greatly, most clinical units require an 80% FT, 10% PT and 10% per-diem structure in order to create a "true" flex budget and keep overtime within benchmark levels (1-3%). Although many healthcare systems believe they are using a flex budget system, this FTE complement is often overlooked, despite its critical nature to the success of an actual flex budget.

By definition, a "true" flex budget system establishes a schedule in which unnecessary staff are called off without pay during low census days. To create this type of schedule, nearly every shift, or at least shifts with unpredictable census fluctuations, must be assigned a per-diem staff member. An external per-diem company should be considered if the internal per-diem pool is unable to fill these staffing requirements.

Per-diem staffing should be used to fill these three conditions: 1) daily staffing requirements as per the grid: 2) replacement or non-productive positions: 3) census peak above 15-20%. Hospital and system administrators need to ask themselves, "does our FTE mix employ enough per-diem staff to fill all of the previous three conditions?" If the answer is no, consideration should be given to possibly partnering with a per-diem company that will help meet the specific needs.

All too often, organizations leave per-diem and travel agency dollars out of their budget equation. The agreedupon FTE positions are budgeted at regular staff rates

TABLE 3: EXAM	PLE OF FTE B	UDGET WORKSHEET			
		Department Number 1001	Department Specialty	Department Manager Nurse Manager	
Patient Days	Current ADC	Productivity Target	Productive Target Per Grid at ADC	Non-Productive Percent	Patient's to Professionals (Days)
3285	9.0	15.3	15.6	14%	2.25
Productive Required	FT FTE's	PT FTE's	PRN/Per-diem FTE's	Adjust to Productive Target from Grid	TOTAL FTE's
Manager	0.8	0.1	0.1	0.0	1.0
Secretary	3.0	0.4	0.4	-0.4	3.4
RN	13.2	1.6	1.6	-0.4	16.4
CNA/NA	1.6	0.2	0.2	0.0	2.1
TOTAL	18.7	2.3	2.3	-0.4	22.9
% by Category	81%	10%	10%		102%
Indirect/Non- Productive Required	Vacation Replacement	WS/Meetings/ Orientation Replacement	Sick/LOA Replacement	TOTAL FTE's	AVG. Salary/FTE*
Manager	0.00	0.00	0.00	0.00	\$72,800
Secretary	0.29	0.10	0.10	0.48	\$26,000
RN	1.38	0.46	0.46	2.30	\$59,280
CNA/NA	0.17	0.06	0.06	0.29	\$27,040
TOTAL	1.84	0.61	0.61	3.07	\$51,088
TOTAL REQUIRED	FT FTE's	PT FTE's	PRN/Per-diem FTE's	TOTAL FTE's	AVG. Salary/FTE*
Manager	0.80	0.10	0.10	1.00	\$72,800
Secretary	3.43	0.48	0.38	3.88	\$26,000
RN	15.00	2.11	1.64	18.75	\$59,280
CNA/NA	1.87	0.26	0.21	2.34	\$27,040
TOTAL	21.10	2.94	2.33	25.97	\$51,562

with only some overtime, not at what historically has been staffed at travel agency and per-diem rates, thus, creating the greatest cause for budget variances. Although most departments are sending staff home when the patient volume warrants less staff, the staff going home are full-time employees, therefore defeating the intent of a flex budget.

The intent of the FTE worksheet is to provide the required number of staff by category in order to create an effective flex budgeting system. The worksheet is then used to develop the final budget and labor dollars.

Create a Position Control The most accurate way to determine the budgeted labor dollars is through the position control tool (Table 4). A position control tool is a management device that should serve several purposes, among which include: creation of an accurate inventory of the current and future human resource requirements, assessment of vacancy rates, and improvement in hiring and scheduling practices.

The position control is generated from the total required FTEs located on the FTE worksheet (Table

3). The required position data is transferred to the position control, which lists all budgeted positions for the specified clinical unit. All salary categories for each position need to then be filled by staff name, including regularly assigned per-diem staff. Adding regular per-diem staff to the position control should help improve productivity, co-worker relationships, physician satisfaction, and provide continuity of care.

Once the data is entered into the worksheet, the position control tool should be used to analyze, plan for, and alter the vacancy rates, current hiring of personnel, and scheduling practices. If used correctly, crisis staffing and scheduling will be avoided by hiring the correct number of staff for a specified shift.

Assess and Plan for Excessive Vacancies

U If the vacancy rate is above the normal rate of 15% per shift, the staffing and budget plan has a high probability of not being actualized (Table 4).

A corrective Human Resource (HR) plan must be implemented within 3 months or the ability to achieve long-term budget objectives will sharply decrease. Not

Position Type	Acct Unit Number	Acct Unit Name	Employee Name	Shift	FTE with Overtime		Hourly rate	Base Salary	Total Salary with OT and Differentials	
Manager	Total FTEs			Manager Total	1.00					\$94,378
US	1001	Specialty Unit	Day Shift Unit Secretary 1	1	1.05	FT	\$11.67	\$24,274	\$26,737	\$32,575
US	1001	Specialty Unit	Day Shift US VACANT	1	0.88	FT	\$10.00	\$17,472	\$19,322	\$27,440
				Day Total	1.93					\$60,015
US	1001	Specialty Unit	Night Shift Unit Secretary 1	3	1.05	FT	\$13.84	\$28,787	\$33,378	\$48,515
US	1001	Specialty Unit	Night Shift Unit Secretary 3	3 3	0.90	PT	\$12.80	\$22,630	\$26,395	\$36,688
				Night Total	1.95					\$85,204
US Total	FTEs			US Total	3.88					\$145,219
				US Vacancy	23%					
RN	1001	Specialty Unit	Day Shift RN 1	1	1.05	FT	\$23.97	\$49,858	\$55,525	\$61,513
RN	1001	Specialty Unit	Day Shift RN 2	1	1.05	FT	\$26.77	\$55,682	\$61,786	\$73,942
RN	1001	Specialty Unit	Day Shift RN 3	1	1.05	FT	\$28.41	\$59,093	\$65,453	\$80,297
RN	1001	Specialty Unit	Day Shift RN 4	1	1.05	FT	\$27.98	\$58,198	\$64,492	\$83,832
RN	1001	Specialty Unit	RN 5 VACANT	1	1.05	FT	\$25.00	\$52,000	\$57,829	\$76,976
RN	1001	Specialty Unit	RN 6 VACANT	1	1.05	FT	\$25.00	\$52,000	\$57,829	\$76,116
RN	1001	Specialty Unit	Day Shift RN 7	1	0.75	PT	\$25.67	\$37,909	\$42,122	\$50,670
RN	1001	Specialty Unit	RN 8 VACANT	1	0.75	PT	\$25.00	\$36,920	\$41,058	\$49,432
RN	1001	Specialty Unit	Day Shift RN 9	1	1.00	In-House Agency	\$30.00	\$62,400	\$64,194	\$71,218
RN	1001	Specialty Unit	Day Shift RN 10	1	0.60	In-House Agency	\$30.00	\$38,516	\$38,516	\$50,411
				Day Total	9.39					\$674,407
				Day Vacancy	30%					
				Night Total	9.36					\$787,791
				Night Vacancy	19%					
RN Total	FTEs			RN Total	19.05					\$1,462,198
				RN Vacancy	24%					
CNA	1001	Specialty Unit	Day CNA 1	1	1.05	FT	\$12.54	\$26,083	\$29,968	\$40,734
CNA	1001	Specialty Unit	Day CNA 2	1	1.05	FT	\$12.00	\$24,960	\$28,761	\$39,367
CNA	1001	Specialty Unit	Day CNA 3	1	0.24	PT	\$11.97	\$5,975	\$6,406	\$6,896
CNA Tota	al FTEs			CNA Total	2.34					\$86,997
Grand Total Specialty Unit FTEs					26.27					\$1,788,792

addressing a high vacancy issue up front in the budget process often leads to lost revenue, which in turn relates to a decline of admissions (holding of beds), longer length of stay and unplanned labor budget overages (Table 5).

While the HR plan is being developed vacancy rates still need to run less than 15%. In the mean time, if a manager is experiencing a critical shortage rate greater than 15%, budgeting for short-term travel nurses (approximately 3-6 months) is recommended. In this situation, experienced travel nurses are the preferred providers to ensure reliable, stable, and immediate relief. When the need for travel nurses arises, hospitals should budget for enough travel nurses to bring the vacancy rate down to 8-10% per shift.

It is essential to monitor and re-evaluate the HR plan frequently. This constant scrutiny will confirm that the plan is being executed as agreed upon by the HR department. If the plan is not being executed appropriately, it should be altered immediately. The ideal process must ensure that newly hired and trained staff have completed orientation before the travel nurses leave.

Analyze the Need for External Staffing Companies: Clinically and Financially

Many hospitals have poorly defined criteria for per-diem or travel nurse usage. However, if the vacancy rates are higher than normal, consideration must be given to an external staffing company. Many hospitals have attempted to manage the vacancy rates through the elimination of per-diem or travel nurses altogether by increasing overtime usage and adding "specialty" or "bonus" pay for regular staff (e.g. double overtime). This has resulted in already overworked regular staff obtaining bonus pay with shift differential to cover shifts at the last minute.

TABLE 5: VACANCY	RATES			
	2000	2001	2002	
Vacancy Rates	19%	19%	23%	
LOS	5.35	5.40	5.43	
Occupancy Rate	68%	71%	76%	
Budget Overage	3%	3%	5%	

The overall labor cost can add up to the same, if not less, for fresh, experienced travel nurses or per-diem staff (Table 6).

Direct expenses cannot be the sole determining factor in the use of external staffing. Several other expenses must be examined including orientation, nonproductive trends and excessive LOS in order to obtain an accurate picture of the actual labor costs or missed opportunities. Turnover and call-ins have become a chronic HR issue and lead to excessive orientation and non-productive dollars. Thus, patient care services (total cost per patient day) may be increasing not decreasing as expected, even without the use of an external staffing resource.

For example, East Hospital 6 (Table 6), which cut out their agency dollars, appears to be well off with the use of the double bonus system. However, they are actually spending \$1M more due to the increase in orientation costs and total labor expenses related to excessive FMLA and sick call-in (Table 7).

Another example is West Hospital 1, which utilizes double overtime. While they have demonstrated lower costs per FTE, the Medicare LOS increased in this time period and equated to \$3.3M in additional labor expenses in 2002 (Table 8).

A staffing company can be extremely useful in creating a responsive work environment. However, the patient care department and staffing office need to clearly communicate to the staffing vendor the per-diem purpose, expected duration, and plan by unit. A standard for the appropriate use of an agency should be clearly defined by specific criteria. The criteria must include details regarding the pathway for obtaining approval to employ an outside agency and designate the appropriate times to employ said agency. This standard will reduce the adverse effects of not having staff to fill "holes" and avoid possible losses in revenue (Table 9). The established guideline should eliminate the abuse and mismanagement of agency use.

The decision whether to use external per-diem or travel nurses should be based on the availability of guaranteed, committed regular staff from a local staffing office to

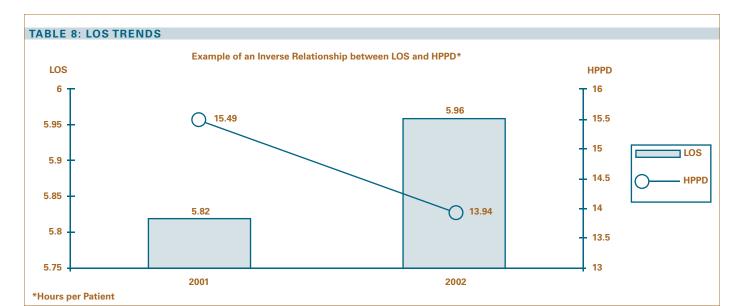
TABLE	6:	DOUBLE	BONUS	VS. AGENCY	COMPARISON

Region	Hospital	Unit Type	Benefited Average Hourly Rate	Avg Hourly Rate Day with Overtime and Inventive Pay	Agency Rate	Difference	% Difference
Midwest	Hospital 7	Med/Surg	\$27.18	\$40.77	\$32.31	\$(8.46)	-21%
East	Hospital 2*	Specialty	\$32.40	\$62.10	\$55.00	\$(7.10)	-11%
South	Hospital 3*	Med/Surg	\$24.89	\$37.33	\$32.31	\$(5.02)	-13%
Midwest	Hospital 8	Med/Surg	\$24.19	\$36.28	\$32.31	\$(3.97)	-11%
East	Hospital 2*	Med/Surg	\$30.42	\$53.93	\$52.00	\$(1.93)	-4%
East	Hospital 5	Specialty	\$34.56	\$55.30	\$55.00	\$(0.30)	-1%
East	Hospital 5	Med/Surg	\$32.08	\$51.33	\$52.00	\$0.67	1%
Midwest	Hospital 7	Specialty	\$27.18	\$40.77	\$41.50	\$0.73	2%
Midwest	Hospital 8	Specialty	\$26.82	\$40.24	\$41.50	\$1.26	3%
South	Hospital 4	Med/Surg	\$26.92	\$40.39	\$42.12	\$1.73	4%
West	Hospital 1	Med/Surg	\$26.43	\$39.65	\$41.47	\$1.82	5%
South	Hospital 4	Specialty	\$29.78	\$44.68	\$46.64	\$1.96	4%
South	Hospital 3*	Specialty	\$26.21	\$39.32	\$41.50	\$2.18	6%
East	Hospital 6*	Specialty	\$32.66	\$52.26	\$55.00	\$2.74	5%
West	Hospital 1	Specialty	\$26.67	\$40.00	\$44.06	\$4.06	10%
East	Hospital 6*	Med/Surg	\$30.44	\$47.48	\$52.00	\$4.52	10%
	* Have Incentive	Pav					

TABLE 7: COST TRENDS

Hospital Example of an Inverse Relationship between LOS and HPPD

Dollars Spend	2000	2001	Difference	% Change
Orientation Dollars	\$504,050	\$733,154	\$229,104	45%
Increase in Non-productive time (Sick Calls)	\$541,967	\$605,596	\$63,629	12%
Labor Expenses	\$74,967,022	\$75,755,022	\$788,000	1%
TOTAL	\$76,013,772	\$77,093,772	\$1,080,733	1%



fill the staffing grid needs for the desired timeframe and shifts, necessary competency requirements and the budgeted dollars available. Obviously, minimizing travel and housing costs is optimal when your needs are met locally. However, keep in mind the long-term goal and the potential trade-off when making the final decision. For example, many hospitals select per-diem staffing to avoid the travel expenses but end up with different staff in the unit everyday creating more anxiety for all. Is it worth it?

Reconcile and Check for Internal Consistency

Internal consistency is the final check before signing off on an annual budget. In most institutions there is a discrepancy between the final budgeted labor dollars (position control), the plan of care, and the staffing grids. This inconsistency can cause 85% of the budget variances (Table 10).

TABLE 9: CRITERIA FOR EXTERNAL STAFFING USAGE

Example of Criteria for Travel Nurse or Per-diem Consideration

- 1. Is your overtime usage greater than 3%-5% of regular salaries?
- 2. Is your institution paying incentive bonuses above and beyond regular hours for full-time staff, e.g., double overtime?
- 3. Is your turnover rate at or greater than 15% for three trends?
- 4. Is your vacancy rate greater than 15% per shift?
- 5. When reviewing unit schedules, are staffing "holes" greater than 10%?
- 6. Has volume increased for the last quarter to the point where the current staffing is not able to cover the necessary staffing?
- 7. Have you had to close beds due to lack of staff?
- 8. Is your average hourly salary rate per unit higher than the area industry average?
- 9. Does more than one-third of your staff have less than 2 years' experience?
- 10.Does your institution find the need to pay internal per-diem bonuses?

To avoid a budget variance it is essential for the clinical and finance teams to check for internal consistency.

- Is the master staffing plan for the designated population reflected in the staffing grid and care hours?
- Do the budgeted FTEs match the volume on the staffing grids?
- Does the position control match the mix of fulltime, part-time and premium pay staff as per the FTE worksheet?
- Is the vacancy rate with per-diem staffing greater than 15%? If so, have travel nurse dollars been budgeted to reduce the vacancy rate to 8-10%?

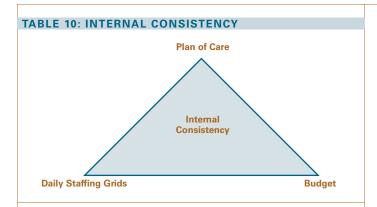
If the answer to all of these questions is "yes," the final budget will be achievable. After six months, or when a budget trend is occurring, the actual performance should be measured against the plan (Table 11).

Develop A Staffing and Scheduling System

Once the budget is finalized, the most critical and oftencomplex component of a successful system begins with the management of the daily staffing and scheduling system. Despite posting schedules in advance, managers are spending 60% of their time trying to find staffing to work that day for "known holes" (unfilled staff slots) in the schedule. This is caused by a lack of tools (previously discussed), poor use of information systems, inadequate training in staffing and scheduling and proactive planning.

🚺 Develop a Master Schedule

Every manager completed a 4-6 week schedule in advance. But most managers, 50% or greater, create a "true" master schedule with per-diem and agency built in for flexing. Once reconciliation among the



nursing plan of care, the staffing grids, the FTE budget worksheet and position control has occurred, a master schedule should be developed. The master schedule should cover a 4-6 week period. The key to creating a master schedule is to analyze the census by shift and day of the week for the past three years and develop a master schedule based on the grid requirements. Despite the myth, clinical schedules are very predictable. If completed correctly, 50% of the perceived "holes" in the schedule can be eliminated simply by scheduling staff where census is expected to be higher or lower than the average. The problem often arises when no one tracks the census data, as well as when the manager has hired too many staff for the wrong shift. If the later occurs, the position control needs to change. If the clinical units' actual needs are reflected in the position control, correct hiring should proceed accordingly.

Create a Pro-Active Daily Scheduling System

Creating the schedule 4-6 weeks in advance allows plenty of time for anticipating the "holes" in the schedule. Unfortunately, the majority (80%) of holes are filled within 24 hours of the shift, leading to expensive and poorly thought-out solutions. Completing the scheduling task early allows each manager to determine if the holes (routinely scheduled positions) are temporary or long-term issues. The answers require fundamentally different solutions.

If there is a long-term problem related to high turnover, the cause must be explored immediately and temporary

travel nurse staffing may be required to control the damage (as discussed previously). If the issue only reflects the current schedule, posting the holes and asking for volunteers or using additional per-diem staff may be the only required solutions. The last issue could be related to higher trends in census rather than budgeting. To avoid loss of revenue, use per-diem if the volume is expected to be short term or travel nurses if the volume is 3 months or greater (again only if the pool of internal per-diem is not large enough).

A goal and process should be established that assures all the "planned holes" are filled within 3 weeks of the posted schedule. To achieve this goal, the manager must be as assertive in routine scheduling as in daily crisisscheduling situations.

Define the Roles and Communicate the Staffing and Scheduling Demands

Most organizations don't take the time to clearly define the job expectations of each staff member based on type of employment status, which is a common cause of job dissatisfaction. In order for the identified staffing and scheduling plan of action to work properly, it is necessary for there to be a partnership and clear understanding among the team members within a given unit (including part-time and full-time employees, perdiem staff and external staffing companies). External staffing companies can be especially supportive because of their experience in staffing complex schedules and staff in off-site locations.

The following is an example of a staffing and scheduling service agreement:

Full- Time Employees:

Full-time employees will be used on the dedicated unit within the agreed-upon master schedule. This staff will not be pulled to cover other units or called off unless they opt to do so and the need is present. Overtime for full-time staff will be limited to 1%-3%, unless special arrangements are made. The overtime



hours should be utilized for planned, short-term events, e.g. vacation or scheduled absences (LOAs). This limitation allows the full-time staff to plan for the extra shift and to reduce dissatisfaction due to daily calls at home. We recommend a list be posted so the FT staff can control the extra hours they volunteer for. The full-time staff will be allowed 2-3 weeks to sign up for extra shifts on the upcoming schedule.

Per-diem Employees (Internal or External):

Based on the master schedule, per-diem employees will be assigned to a primary unit and will report to the manager. The goal is to have one per-diem staff member scheduled per day. If the census drops, the per-diem employee will be pulled first and sent to another unit or sent home. If an unscheduled need arises (e.g. sick calls or volume increases) extra per-diem staff should be scheduled daily to cover expected replacement trends. This data can be tracked daily to determine the correct number needed. When the hospital does not have enough core staffing to cover its needs, external-staffing assistance must be considered using defined criteria in order to continue a smooth-running operation.

Agency Employees:

Your market may drive the need for an external staffing company when the daily staffing demands are unachievable after steps 1-9 are applied. If that is the case, the host hospital must clearly define the criteria for use. For example, one role is to become the back-up for per-diem or travel staff when needed to fill the staffing holes, caused by higher than 20% seasonal variations in census. Secondly, travel nurse staffing can be used to fill excessive vacancies. Lastly, consider the need for replacement coverage especially with the rise in longer LOAs. How your hospital defines the use should be based upon the data analysis that clearly reveals the areas of greater demand. The key to external staffing management and budgeting is to not use these precious dollars for crisis planning.

To avoid last minute coverage, the hospital and vendor of choice should be connected via the information system to allow occurrence of early planning. Sharing information systems is vital to support the staffing and scheduling demands of each unit. The first step is for information systems to be linked to each partner and kept current. Second, a feedback system must be established to evaluate the effectiveness of the service expectations. Last, the outcomes should be measured and communicated monthly to all parties.

Financially, partnerships with staffing companies will help keep costs within budget, but only if the entire budget is considered. The benefits include a decrease in non-productive orientation, and reduced HR costs for hiring, processing, and termination paperwork. By communicating the staffing and scheduling demands clearly, hospitals can negotiate the best rates, clearly define service expectations, and set higher quality standards. All factors are measurable if the expectation is agreed upon up front. Consider including a penalty in the contract that will become effective if a partner fails to comply.

TABLE 12: ECONOMIC IMPACT

"Scheduling for the Holes" – Hospital Actual vs. Agency Expense

Unit	ADC	"Expected Holes" (Hours)	Annual "Expected Holes" (Hours)	Agency Total Annual Cost @\$52/hr	Actual Premium Total Cost @ \$57.60/hr	Annual Variance
1	19	1,764	15,294	\$795,282	\$880,927	\$(85,646)
2	31	336	2,913	\$151,482	\$167,796	\$(16,313)
3	31	1,488	12,901	\$670,850	\$743,095	\$(72,245)
4	12	156	1,353	\$70,331	\$77,905	\$(7,574)
5	124	1,620	14,045	\$730,361	\$809,015	\$(78,654)
6	28	136	1,179	\$61,314	\$67,917	\$(6,603)
7	11	488	4,231	\$220,010	\$243,703	\$(23,693)
8	27	2,160	18,727	\$973,814	\$1,078,687	\$(104,872)
9	74	144	1,248	\$64,921	\$71,912	\$(6,991)
10	28	930	8,063	\$419,281	\$464,435	\$(45,153)
11	26	-	-	\$ -	\$0	\$ -
12	28	-	-	\$ -	\$0	\$ -
13	15	1,320	11,444	\$595,109	\$659,197	\$(64,089)
14	97	1,008	8,739	\$454,447	\$503,387	\$(48,940)
		100,139	\$5,207,202	\$5,767,978	\$(560,776)	

Financial Impact

Optimal planning, budgeting and staffing management create positive outcomes, among which include: decreased labor costs per unit of service, increased job satisfaction, growth in volume, and maintained quality of service. Table 12 highlights the economic opportunity of a three -hospital system if the staffing and scheduling improvements were implemented. The result, with use of agencies, would have been a savings of \$560K annualized, (only direct labor expenses included) (Table 12).

f hospital systems develop staffing and scheduling models that allow units to appropriately adjust staffing, daily crisis management can cease to exist. The preceding data has demonstrated several scenarios where utilizing external agencies may be cost-effective. When deciding if a staffing company is right for your health system, the system must assess all the clinical components (e.g. excessive LOS or lost capacity) and the total financial costs (e.g. increases in non-productive time and orientation dollars). The use of the latest HR strategies may eliminate avoidable hidden expenses and lost revenue opportunities. The use of criteria can help the system to avoid the pitfalls of over use and create better partnerships in patient care. The outcome of developing and implementing an effective staffing and scheduling system, which includes an agency partnership, will produce a better bottom line for an organization.

Hospital and system administrators should ask themselves: "Are our clinical departments, staffing office, and managers spending less than 25% of their day in crisis staffing and scheduling? Are our projected budgets achieved within 2-3% of the goal?" If the answers to either question is no, Phase 2 Consulting highly recommends a thorough evaluation of the outlined 10 steps. Assessment of the 10 steps will identify potential opportunities and quantify the economic impact staffing and scheduling changes to your system. In using this disciplined methodology it is clear that our clients have experienced both a decline in clinical frustration and tangible financial savings.



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