High labor expenses? Better staffing and scheduling can cut costs

OR Business Performance is a series intended to help OR managers and directors improve the success of their business.

The OR labor budget usually takes a back seat to supplies and equipment. But labor costs can still create significant spending problems. Many hospital surgery departments use nursing full-time equivalents (FTEs) to solve problems that could be addressed with less expensive resources. As a result, labor costs balloon, often running 20% to 30% higher than they need to be.

Effective surgical services directors use a combination of strategies to control labor costs. Many have been able to reduce labor spending by addressing root problems within their OR schedule, their clinical team model, and staff satisfaction.

Use “vertical” scheduling
Most hospital ORs have a “horizontal” schedule. The department manages fluctuations in case volume by opening more rooms rather than by making the most of every available room. Staff have significant downtime during prime time OR shifts. Overtime pay is used liberally to accommodate late-afternoon cases. Overall room utilization is low, and worked hours run high in relation to case volume.

The alternative is a “vertical” scheduling model. A vertical schedule optimizes staff productivity, which inherently minimizes downtime to make full use of paid hours and reduce excess staffing costs.

In the May issue of OR Manager we showed how to increase utilization by reforming the surgeon block schedule. Optimizing utilization will typically enable a department to reduce the number of staffed rooms by requiring surgeons to fill their blocks in a vertical fashion rather than peppering cases throughout the week. The next step is to take full advantage of room reductions by tailoring an efficient staffing structure.

“How Many FTEs Do You Need?” illustrates a 5-step process for calculating total FTEs based on the number of staffed rooms and hours of operation (p 27). The benchmark used here is AORN’s standard 2.5 FTEs per room, but this number can vary based on case mix and other factors. Benefit hours or percentages depend on your department’s actual benefits package, educational mission, and so forth. Note that this framework is for direct care staff only. Calculate support staff requirements separately based on workload and assignments.

Achieving an optimal FTE count will result in labor cost reductions or reallocations in most organizations. For example, suppose a hospital OR implements utilization improvements to reduce staffed rooms from 18 to 15. Annual labor costs (inclusive of benefits) per room include 1.5 RNs ($90,000/FTE) and 1 surgical technologist ($60,000/FTE). Anesthesia staffing costs will also be affected. In many settings, the anesthesia stipend can range between $150,000 and $550,000 per room per year, depending on whether anesthesia uses a team-based or an all-physician model. Costs for nurses, surgical technologists (STs), and anesthesiologists combined are approximately $345,000 to $745,000 per room per year. Bottom line: eliminating 3 staffed rooms could result in annual labor expense savings of between $1,035,000 and $2,235,000.
Manage the day

Surgical services directors can also control labor costs by managing the daily use of existing staff resources more efficiently.

- Stagger start times. Some ORs assign a 7 am start time for all rooms. Typically, however, presurgical holding staff cannot prepare every patient in time for the scheduled start. This leads to staff downtime and reduced productivity. The solution is to start morning cases in waves. Depending on the capacity of presurgical, nursing, and anesthesia staff, you could open 4 rooms at 7 am, another 4 rooms at 7:15 am, and so on.

- Flex staff appropriately. Many OR managers do not carefully monitor flex schedules. At 1 hospital we visited, the OR staffed 18 rooms from 7 am to 7 pm every day, regardless of the number of procedures scheduled for a particular day. To develop an effective flex schedule, track case volume by day of week and hour of day. Most OR software applications can report the number of open ORs and total surgical case minutes per day in half-hour increments. By reviewing historical utilization by day and hour, you can develop a room and staff schedule that mirrors existing volume patterns. Any efforts to achieve a vertical, high-utilization schedule will support more robust flexing.

- Improve the accuracy of scheduled case times. Many ORs allow surgeons or surgeons’ office staff to assign case duration when scheduling a procedure. These case time estimates are usually inaccurate and often reflect wishful thinking. Instead, use a “historical case time” method for scheduling. Identify the actual duration of the last 12 like procedures performed by a surgeon, drop the high and low values, and average the remaining 10 case times. Most clinical information systems can be configured to automate this calculation for scheduling staff.

- Cross-train selectively. Better-performing surgery departments cross-train staff in the preoperative unit and the postanesthesia care unit (PACU). This allows an OR to add staff at the beginning of the day to get cases started and at the end of the day to assist with patient recovery.

Cross-training provides greater ability to flex staff up and down to match case volume, and it can create opportunities to consolidate staff. We recently helped a hospital combine staff from presurgical testing, same-day surgery, and the PACU into a single unit. This move allowed the OR to reduce staffing by 2 RN FTEs (in this case, a total savings of $170,000) and to streamline the OR management structure. The consolidation also enhanced peer-to-peer accountability for performing func-

### How Many FTEs Do You Need?

**Step 1: Calculate total staffed hours per week**

<table>
<thead>
<tr>
<th>Schedule</th>
<th># of rooms</th>
<th>Days per week</th>
<th>Hours per day</th>
<th>Total hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>07:30 - 15:30</td>
<td>18</td>
<td>5</td>
<td>8</td>
<td>720</td>
</tr>
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<td>15:30 - 17:30</td>
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<td>5</td>
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<td>5</td>
<td>3</td>
<td>2</td>
<td>30</td>
</tr>
<tr>
<td>Weekend</td>
<td>2</td>
<td>2</td>
<td>8</td>
<td>32</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>892</strong></td>
</tr>
</tbody>
</table>

**Step 2: Calculate basic FTEs**

- Total staffed hours per week = 892
- x staff per room = 2.5
- = total working hours per week = 2,230
- + weekly hours per FTE = 40
- = total working FTEs = 55.75

**Step 3: Calculate benefit hours per FTE**

- Vacation/sick = 160
- + holiday = 48
- + education/orientation = 150
- + break/lunch = 260
- = total benefit FTEs = 618

**Step 4: Calculate benefit FTEs**

- Total working FTEs = 55.75
- x benefit hours per FTE = 618
- = total benefit hours = 34,453.5
- + annual hours per FTE = 2,080
- = benefit FTEs = 16.56

**Step 5: Calculate total minimum clinical staff**

- Basic FTEs = 55.75
- + benefit FTEs = 16.56
- Total FTEs = 72.31
tions effectively because staff now understood the downstream repercussions of not completing charts, such as lack of preoperative testing optimization and discharge delays.

**Optimize staffing model**

Many hospital ORs can reduce labor costs by using more STs. Any nursing role that is converted to a ST position represents a savings of approximately $30,000 in salary and benefits. In addition, hiring more STs makes it easier to manage call teams.

Still, there are several good reasons to maintain a higher ratio of RNs. In some surgery departments, increasing the RN staff will reduce overtime and agency costs. In many hospitals, particularly academic medical centers, mission and service commitments call for a richer staff structure. In other hospitals, a higher RN ratio is a key marketing differentiator. For example, OR teams may include a first assistant or the department may employ a dedicated turnover team. Both staffing strategies can increase surgeon satisfaction.

Up-staffing can also improve department efficiency. For example, RNs enable greater versatility in cross-training staff between different specialties. Some hospitals have found that hiring physician assistants (PAs) for certain OR specialty teams can improve service efficiency while decreasing case times. PAs can also provide added value to key service lines (like orthopedics) by assisting in rounding and writing scripts, thereby creating a competitive advantage in the market.

Do not forget to review your staffing model in out-of-department or non-OR areas. An academic medical center we visited was significantly overstaffed in its OR access center. By streamlining processes and implementing a more productive staffing model, the department reduced access center staffing from 21 to 10.5 FTEs. In this institution, that translated into a savings of $610,000 per year.

**Reduce turnover**

Staff turnover is a huge source of cost in hospital ORs. Turnover increases the use of overtime and nursing agencies and also creates onboarding costs. Nationwide, average annual OR turnover is 14%, so any rate below 12% could be considered “good.” Keep in mind, however, that many best-run surgery departments achieve annual nursing turnover of 3% or less.

How can you transform an OR from a high-turnover to a “high-retention” organization? Maintaining staff satisfaction is one of the most valuable competencies in OR leadership, and many factors come into play. Here, we focus on what we see as two critical components of nurse satisfaction:

- **Predictability in working environment.** Once again, the key issue is scheduling. A chaotic schedule often results in staff being sent home early without pay. Alternatively, staff are frequently called in from home or asked to work overtime. The extra money is nice, but the personal disruption is wearing on a long-term basis. A high-utilization schedule with consistent 8-, 10-, or 12-hour shifts creates a predictable working environment for staff. Ultimately, greater predictability reduces burnout and turnover.

- **Involvement in decision making.** Instead of dictating all decisions, effective surgical services directors describe a problem and invite staff to take part in devising a solution. One thing that makes Magnet organizations so effective is that staff members participate in nursing governance councils, contributing directly to decisions involving departmental processes and clinical improvement.

Nurses should also have a say in more mundane matters. At a large urban medical center we visited, OR nurses provide input on the monthly schedule. They sub-
mit the days they would like to work and the days they want off. Requests are not guaranteed, but the chance to help set their own schedule is highly appreciated. This improves staff morale, gives nurses a stronger sense of ownership in decisions, and consequently helps keep turnover low.

**Next month**
Effectively managing your OR schedule and staffing model not only supports cost control, it helps keep nurses engaged in your department’s mission and objectives. In the next OR Business Performance column, we will explore an important strategy for keeping surgeons engaged in OR goals. Learn how to use surgeon dashboard reports to maintain your OR’s clinical and financial performance.

*This column is written by the perioperative services experts at Surgical Directions (www.surgicaldirections.com) to offer advice on how to grow revenue, control costs, and increase department profitability.*