Though challenged by shortage, OR leaders find ways to cope

Though more than half of hospital OR managers—56%—are feeling the effects of the nursing shortage, they seem to be finding ways to cope with it.

In all, about a third (34%) are seeing extended hours for scheduled surgery, and 44% are using more overtime to complete the schedule because of a lack of nursing staff.

Some—15%—are experiencing longer patient waits for elective surgery. A few, 4%, have had to close an operating room for more than 1 week, and 7% have lost surgical cases to other facilities.

Yet managers report lower vacancy and turnover rates than in recent years, 6% and 7%, respectively, for both RNs and surgical technologists (STs).

Recruiting is difficult for nearly 9 in 10. But OR leaders are fighting the shortage by developing their own programs to prepare OR staff. Realizing their veteran nurses are an important asset, some are taking steps to keep senior nurses on board. And ORs are hiring new graduates, almost unheard of in the past.

Results are from the 2005 OR Manager Salary/Career Survey. This is the fifth year the staffing questions have been asked. The rest of the survey results will be in the October issue.

The survey was mailed in May to a random sample of 1,220 OR Manager subscribers with 312 returned, a rate of 26%. A separate survey was sent to ambulatory surgery centers (related article).

Recruiting is tough

Recruiting in hospital ORs is increas-

Continued on page 12

OR incentive programs reward staff for ingenuity, taking initiative

Too often, when OR staff work hard-
er to improve service by reducing turnover time or improving on-time starts, their reward is to have another case added to the schedule.

Some OR managers are finding other ways to recognize initiative and ingenuity—cash, gift certificates, and letters from top executives.

So far, those giving financial rewards are in the minority: 18% of respondents to this year’s OR Manager Salary Career Survey say they have such a program.

Four managers described their incentive programs in interviews with OR Manager. (They were identified separately from the survey.)

Building a case for cash bonuses

St Joseph Hospital in Orange, Calif,

Continued on page 20

Preconference issue

Managing Today’s OR Suite
Oct 19 to 21, 2005
San Diego
Please see the ad for
MEGADYNE
in the OR Manager print version.
**Editorial**

What are ORs doing to attract and keep nurses over age 50? It's an important question. Nurses from 50 to 64 made up 60% of RN employment growth from 2001 to 2004, according to Peter Buerhaus, RN, PhD, of Vanderbilt University, the leading researcher on the nursing workforce. In 5 years, nearly half of RNs are expected to be over 50. There will be a serious impact when they begin to retire. Though a surge of younger people have come into nursing in the past couple of years, it’s not expected to make up for the loss of their older colleagues.

Hospitals will need to hang on to every veteran RN they can. They won’t be able to do that without some changes in the way nurses work. Perioperative nursing involves long hours of standing as well as lifting, pushing, and pulling.

Some ORs are making adjustments. Managers told us what they’ve been doing in responses to the **OR Manager Salary/Career Survey (p 16)**.

What would make it easier?

We talked to one perioperative nurse, who at age 58, plans to keep practicing at the University of Virginia Medical Center in Charlottesville, has been in practice since 1968 and plans to continue until she’s 65.

She was recently asked to join the hospital’s professional nurses organization to discuss ways to meet needs of mature workers.

Here are some of her suggestions to help over-50 nurses keep working longer:

- **Provide help with transporting patients.** Doors are heavy, and it is hard to push patients and equipment.
- **Consider better flooring.** Hard floors take a toll on backs and legs. Stacy’s hospital is trialing badge-type communication devices for charge nurses and front-desk staff.
- **Enhance vision.** Type seems to get smaller with each year of age. Some nurses special-order bifocal goggles. Stacy has a magnification attachment for her computer screen to aid charting.
- **Provide assistive devices for moving patients.** Air mattresses and roller boards are 2 options, though they may not work for all patients.
- **Modify instrument sets.** “Lighten the load. Pare instruments down to the basics,” Stacy says.
- **Promote ergonomics for computer users.** Data entry can strain hands and wrists. Stacy requested a padded hand rest for her computer keyboard. She thinks pads and other ergonomic principles should be considered for all staff who use computers.
- **Look at modifying call schedules for veteran staff—and extended hours for all.** Researchers have identified fatigue as a patient safety issue. Perioperative managers are discussing how they can adjust work patterns to reduce risks. (See article on p 22.)

Veteran staff are an asset, not only to the facility but to patient care. A few adjustments might help senior nurses feel valued and appreciated. Employers, in turn, may find they’re willing to keep working longer.

—**Pat Patterson**
Please see the ad for MEDLINE INDUSTRIES INC. in the OR Manager print version.
National surgical QI project rolls out

Ten organizations joined in August to roll out a national effort to battle surgical complications.

The goal of the Surgical Care Improvement Project—SCIP, or “skip”—is to drive down complications by 25% over the next 5 years by reducing 4 types of complications:
- surgical site infections
- perioperative heart attack
- deep vein thrombosis and pulmonary embolism
- ventilator-associated pneumonia.

SCIP leaders say 13,000 deaths and 270,000 surgical complications could be prevented each year in Medicare patients alone if the SCIP measures were widely applied.

OR Manager interviewed 3 SCIP leaders: David Hunt, MD, FACS, medical officer for the Centers for Medicare and Medicaid Services (CMS) Quality Improvement Program; Linda Groah, RN, MSN, CNOR, CNA, FAAN, of the Association of periOperative Registered Nurses (AORN); and Karina Carr, RN, CPHQ, project manager for SCIP at the Quality Improvement Organization Support Center in Oklahoma City.

Here are some questions and answers about the program.

Who’s leading SCIP?
A. Spearheading SCIP are the Agency for Healthcare Research and Quality, American College of Surgeons (ACS), American Hospital Association, American Society of Anesthesiologists, AORN, Centers for Disease Control and Prevention (CDC), CMS, Institute for Healthcare Improvement (IHI), Joint Commission on Accreditation of Healthcare Organizations, and Veterans Health Administration.

We’re already participating in other QI projects. Why should we join SCIP?
A. “That’s a question we honestly had to look at,” says Dr. Hunt. “We think we have to be able to gather all of the relevant QI activities for surgery under one SCIP umbrella. We’ve been able to bring in the major stakeholders from all of the groups that are doing big national campaigns on surgical QI.”

Groah says, “This is the first time in my career that I’ve seen 10 key organizations that are the drivers of quality patient care for surgery come together.

“I would stress that this is a partnership among nursing, surgery, and anesthesiology that began with the time-out protocol,” for surgical site verification, issued in 2003.

Groah thinks the unified effort could give traction to issues perioperative nurses have tried to address for years, such as eliminating the preoperative shave, which has been proven to increase surgical infection rates.

“Now we will have the support of a national initiative,” she says.

Carr adds that SCIP is working to align its measures with those of its partners, including IHI—which has signed up 2,500 hospitals for its 100,000 Lives Campaign—as well as JCAHO, the ACS National Surgical Quality Improvement Project (NSQIP), and the CDC’s National Healthcare Safety Network (NHSN), an expansion of the National Nosocomial Infections Surveillance (NNIS) system.

“The United States has a wonderful health care system,” says Carr, “but we still have preventable complications in surgery. There are strategies we can take to decrease the possibility of these complications. We need to make sure every patient gets the appropriate care every time.”

How will hospitals benefit from participating?
A. “Everyone wants to improve care, but there are fiscal realities to all of this. We are trying to make a strong business case for SCIP,” Dr. Hunt says. “We are saying, ‘If you do this, you will be stronger financially as an institution.’ I think that is going to make a difference today when margins are so tight.”

The cost of treating complications can run into the tens of thousands of dollars. A postoperative respiratory complication can run to $52,000, for example (sidebar). With Medicare patients, the hospital eats most of that extra cost.

Continued on page 7
Please see the ad for
KARL STORZ ENDOSCOPY-AMERICA
in the OR Manager print version.
The Surgical Care Improvement Project is targeting these 4 areas:

**Surgical site infections**
Surgical site infections (SSIs) account for 14% to 16% of all hospital-acquired infections and are among the most common complications of care. SSIs occur in 2% to 5% of patients after clean extra-abdominal operations and in up to 20% of patients having intra-abdominal procedures. Among surgical patients, SSIs account for 50% of all hospital-acquired infections. Research shows that by reducing SSIs, for each patient who develops an infection, hospitals on average could save $3,152 and reduce the length of stay by 7 days.

**Examples of ways to prevent SSIs:**
- Administer prophylactic antibiotics within 1 hour prior to surgery.
- Control perioperative serum glucose in major cardiac surgical patients.

**Adverse cardiac events**
Adverse cardiac events occur in 2% to 5% of patients having noncardiac surgery and in as many as 34% of patients having vascular surgery. Certain perioperative cardiac events, such as myocardial infarction, are associated with a mortality rate of 50% to 70% per event as well as prolonged hospitalization and higher costs. Studies show that nearly half of the fatal cardiac events could be preventable with beta-blocker therapy.

**Examples of ways to prevent adverse cardiac events:**
- Administer beta-blockers to eligible major noncardiac surgical patients during the perioperative period.
- Administer beta-blockers to surgical patients with evidence of coronary artery disease during the perioperative period.

**Deep vein thrombosis**
Deep vein thrombosis (DVT) occurs after about 25% of all major surgical procedures performed without prophylaxis. Pulmonary embolism (PE) occurs in 7% of surgery conducted without prophylaxis. More than 50% of major orthopedic procedures are complicated by DVT and up to 30% by PE if prophylactic treatment is not instituted. Despite well-established efficacy and safety of preventive measures, studies show that prophylaxis is often underused or used inappropriately.

**Examples of ways to prevent venous thromboembolism (VTE):**
- Assess patient risk for VTE and administer appropriate perioperative prophylaxis.

**Perioperative ventilator-related pneumonia**
Ventilator-related pneumonia occurs in 9% to 40% of patients and has an associated mortality rate of 30% to 46%. Many of the risk factors for this event respond to medical intervention and thus are preventable. A conservative estimate of the potential savings from reduced hospitalization due to postoperative pneumonia is $22,000 to $28,000 per patient admission.

**Examples of ways to prevent postoperative pneumonia:**
- For major surgical patients on a ventilator who are without contraindications, postoperatively elevate the head of the bed to at least 30 degrees.

The SCIP measures are expected to be released in September.

**The business case for surgical quality**
Complications result in an increased median length of stay:
- Infectious: 2.8 days
- Cardiovascular: no days
- Respiratory: 5.5 days
- Thromboembolic: 2.8 days
And an increased cost:
- Infectious: $1,398
- Cardiovascular: $7,789
- Respiratory: $52,466
- Thromboembolic: $18,310


**What resources will SCIP provide?**
A. A change package is expected to be available on the SCIP web site (www.medqic.org/scip) in September. A nationwide conference call is planned, probably in October.

Hospitals can also look to SCIP partners for support as well as to their Medicare Quality Improvement Organizations (QIOs), which will form participant groups, says Carr. QIOs may choose to do a collaborative, one-on-one consultation, phone calls, or site visits.

**How will data be submitted? How will progress be measured?**
A. SCIP is working to align its data submission tool with those of its partners who also collect data, Carr says. Plans are for SCIP to have a common data dictionary, data collection strategy, and data analysis algorithms with others such as ACS NSQIP, IHI, the CDC, and JCAHO.

CMS is building a data warehouse and working out agreements to include SCIP data. “We are going to be able to maintain and compare data from multiple programs in one common repository,” Dr Hunt says.

**How can OR managers and directors be involved in SCIP?**
A. “More and more, nurses are adopting evidence-based practice,” which is what the SCIP measures are based on, Groah notes. Managers can help not only by serving on QI task forces but by educating their staffs about SCIP. They can help the staff understand SCIP core measures and how they align with other QI efforts.

“These aren’t silos—they really are integrated,” Groah says.
Kimberly-Clark donates scholarship to Institute

This year’s OR Manager of the Year will receive a scholarship from Kimberly-Clark Health Care to attend the 10th Georgetown University Healthcare Leadership Institute July 9 to 14, 2006, in Washington, DC. The scholarship will provide tuition, breakfasts and lunches, reception, banquet, and a certificate of completion to attend the Kimberly-Clark-sponsored institute. OR Manager, Inc., will provide airfare and lodging.

The OR Manager of the Year will be honored at the annual Managing Today’s OR Suite conference Oct 19 to 21 in San Diego.

“The scholarship is a wonderful gift from Kimberly-Clark that strengthens the benefits that the OR Manager of the Year receives,” said Elinor S. Schrader, president of OR Manager, Inc. “It fits well with OR Manager’s mission to provide current information and education for those who manage the OR.”

Sandy A. Buhler, manager of professional relations for Kimberly-Clark, said, “I am pleased that Kimberly-Clark can provide the scholarship to a distinguished leader in the OR. It demonstrates Kimberly-Clark’s commitment to education for health care leaders.”

According to Billie Fernsebner, RN, MSN, education specialist, OR Manager, Inc., who attended the 2005 institute, the program offers a unique opportunity for health care leaders to meet in a relaxed academic setting. Because the program has 4 1/2 days of education sessions, there is ample time for faculty to present topics and provide time for students to hone their new skills, such as negotiations or strategic marketing. The 2005 faculty included faculty from the Georgetown McDonough School of Business, the Georgetown School of Nursing and Health Studies, and visiting faculty such as David Maxfield, who spoke this year on the study, Silence Kills: The Seven Crucial Conversations in Healthcare.

NFPA adopts new wording on alcohol-based preps

The National Fire Protection Association (NFPA) in late July accepted an amendment to NFPA 99 on alcohol-based surgical prep solutions. Basically, the new language says that flammable prep solutions used for a procedure where electrosurgery, cautery, or laser is likely to be used will be in a package that ensures “controlled delivery,” such as unit-dose applicators or swabs.

In addition, the amendment says time must be allowed for the solution to dry and vapors to dissipate before drapes are applied and the heat source is used. Also, solution-soaked materials must be removed from the OR and pooling avoided.

The NFPA amendment says there must be a “timeout” before surgery that involves a flammable prep and a heat source to make sure the conditions described above have been met. Facilities must also have policies and procedures with safety precautions related to use of flammable prep solutions when electrosurgery, cautery, or laser use is contemplated.

The amendment was proposed this spring after the Nebraska state fire marshal and Department of Health and Human Services told hospitals and surgery centers they could not use flammable prep solutions in surgery involving heat sources. The ruling was based on NFPA language that health care organizations thought was outdated. The Nebraska position was later modified. But health care groups were concerned authorities in other areas might invoke the outdated language.

The NFPA amendment will become part of the 2005 edition of NFPA 99 and must now be adopted by regulators including the Centers for Medicare and Medicaid Services.

The NFPA amendment will be posted on the American Society for Healthcare Engineering web site at www.ashe.org.

Will SCIP data be made public? Will it be used in deciding how much hospitals get paid?

A. At its root, SCIP is a QI initiative, says Dr Hunt. “That is the heart of why we started it.”

The data will be available first to the participating hospitals so they can see how they are doing and plan QI efforts. But public reporting and linking pay to performance have been on the table since the beginning of meetings with the steering committee, Dr Hunt says.

SCIP is working with the Hospital Quality Alliance to see which measures would be appropriate for public reporting. CMS is also on the record for the need to explore pay for performance—paying hospitals differently according to how well they perform.

“Eventually, I would not be surprised if the SCIP measures turned out to be those that are useful for public reporting and pay for performance in the surgical sphere,” he says.

Do we have to submit data to participate?

A. SCIP is asking hospitals that participate to submit data on at least 1 of the 4 complications.

“We hope they will go ahead and measure,” Carr says. But the QI strategies will be available, so if a hospital wanted to use those to improve care without measurement, that would be possible.

A lot of the SCIP measures involve physicians. How does SCIP plan to get physicians on board?

A. “We recognize that most of the major problems that affect surgical patients really are problems of the system rather than individuals,” Dr Hunt says. “We are trying to develop a cohesive program that touches all of the components in surgical services that have an impact on care of the patient.

“Surgeons have a long commitment of wanting to push the quality improvement envelope, so it really is not a hard sell for surgeons to join.”

The main thing is to demonstrate that it is not going to be a huge burden for them in paperwork and committee time, he says.

A SCIP recruitment packet and other information are at www.medqic.org/scip.
Please see the ad for OLYMPUS ENDOSCOPY in the OR Manager print version.
Please see the ad for SURGICAL INFORMATION SYSTEMS in the OR Manager print version.

ATTN KENDALL:
Please strip in the following line at the bottom of this ad:

Come see us at Booth 511 during the Managing Today's OR Suite Conference
Penelope Surgical Instrument Server—the first autonomous surgical robot—has assisted in her first human procedure at Manhattan’s New York-Presbyterian Hospital. Penelope’s inventor, Michael Treat, MD, tells OR Manager he is pleased with how Penelope performed.

During Penelope’s début on June 16, she assisted in removing a 2-cm benign lipoma on the left arm of a female volunteer. During the half-hour procedure, Penelope passed 9 separate instruments in 37 instrument exchanges with surgeon Spencer Amory, MD, chief of surgery at New York-Presbyterian. Dr Amory used a headset to ask Penelope for instruments. Penelope had been programmed to recognize Dr Amory’s voice. The scrub nurse, Doreen Taliaferro, RN, passed the sharps and local anesthetics.

**Penelope has matured**

When OR Manager first reported on Penelope in March 2004, Dr Treat, a general surgeon, was just finishing the assembly and testing of what he termed “the near-clinical machine.” With the completion of her first case, Penelope has matured.

Penelope has a software “brain” that can look at instruments, count them, know where they are, and hand them to the surgeon using a lightweight arm and electromagnetic hand. She also has software for speech recognition and generation.

Over the past year, Dr Treat and his team have tackled the problems of draping, sterile prep, instrument tray design, and other details. Penelope also now has a “total automatic counting system” (TACS), which enables her to count items precisely.

The robot was designed and developed by Robotic Surgical Tech, Inc. The developers are in final stages of getting approval from the Food and Drug Administration for a clinical investigation.

**Penelope’s forté is counting**

Though Dr Treat’s initial goal for Penelope was to serve as the scrub nurse on minor cases, he now expects her chief asset will be the ability to perform counts. He says he realized this while working with Taliaferro in setting up for Penelope’s first case.

“Penelope will be a big help for nurses because she will be able to do the repetitive tasks that take up time and allow nurses to attend to the needs of the patient and surgical team,” says Taliaferro.

With her machine vision and TACS, Penelope can instantly count instruments at any time during a procedure, no matter how large or small the case, says Dr Treat.

“Imagine having an instant count of a whole tray of orthopedic hardware and screws and know if something is missing,” he comments. “That is what Penelope will be able to do. She will be to nurses what R2-D2 is to Luke Skywalker in ‘Star Wars’.”

TACS will also be able to count suture and sponges. Dr Treat has a grant from the National Institute of Nursing Research to develop and study the feasibility of TACS.

Sponges may be harder to count than other objects because they will have to be opened. Because Penelope’s “vision” works according to a template, she will know what an unfolded sponge looks like but not a folded or scrunched-up sponge.

Even if the scrub nurse has to make sure the table of instruments is laid out so Penelope can see it all, the robot will still save time in counting, Dr Treat says. If a hospital wanted to use Penelope just for counting and not instrument delivery, it could buy the TACS without the arm, he says. Penelope would probably cost about $100,000 and last about 5 years with software upgrades. TACS alone would cost less.

Penelope’s next case, planned for the fall, will be a hernia repair.

Penelope could also have a role on the battlefield. She has been chosen to be a part of a $12 million Pentagon project to develop an unmanned trauma pod with robots to provide immediate surgical care to wounded soldiers.

—Judith M. Mathias, RN, MA

More information on Penelope is at www.roboticsurgicaltech.com.
Hospital respondents to survey

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<td>Central</td>
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Questions were asked: ‘Is recruiting experienced OR nurses difficult?’

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<tr>
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<td>South</td>
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<tr>
<td>West</td>
<td>Very</td>
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Numbers may total more than 100% due to rounding.

Continued from page 1

89% of OR managers find recruiting perioperative RNs very or somewhat difficult. Community and teaching hospitals find it equally tough.

Results by size of OR:

- Recruiting experienced OR nurses is:
  - 1-5 ORs: 47% very difficult, 43% somewhat difficult, 9% not difficult
  - 6-9 ORs: 39% very difficult, 50% somewhat difficult, 11% not difficult
  - 10+ ORs: 46% very difficult, 42% somewhat difficult, 13% not difficult

Hiring experienced OR RNs is largely a thing of the past—88% of respondents say they hire nurses without perioperative experience, which has held steady for the past 5 years. But that’s a dramatic change from 1991.

Most likely to hire without OR experience are small (89%) and large ORs (91%), while medium-sized ORs are the least likely (82%) to do so. Hospitals in the East (91%) and West (86%) are least likely to hire novices.

OR vacancies

The vacancy rate for both RNs and STs, at 6%, is lower than in 2001 when 9% of RN positions and 12% of ST positions were open.

Overall, the average number of openings was 1.9 for RNs and 1.1 for STs.

Small ORs had the highest RN vacancy rate (8%). Regionally, the vacancy rate for RNs was highest in the South (8%), while for STs the rate was highest in the West (7%).

On average, RN positions were open for 13 weeks and ST positions for 10 weeks. One manager wrote that she had had open positions in the cardiovascular ORs for 2 years and was using travelers to fill in.

Teaching hospitals took the longest on average—15 weeks—to fill RN slots. Finding staff took longest in the West, where the average RN position was open for 17 weeks, and the average ST position was open for 14 weeks.

Turnover rates

Turnover for both perioperative RNs and STs among survey respondents has improved in the past few years. This year’s RN turnover rate of 7% compared with 13% in 2001, and ST turnover was 6%, down from 12% in 2001.

Temps and travelers

About one-quarter of ORs (23%, n = 75) routinely use agency or traveling staff, a number that has been roughly the same for the past 3 years. By far, the West is the heaviest user of contract staff, with 47% regularly relying on temps.

Teaching hospitals (32%) are more likely than community hospitals (20%) to depend on travelers. The largest ORs use travelers more heavily than medium-sized and small departments.

Routine use of temps by number of ORs

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<thead>
<tr>
<th>Number of ORs</th>
<th>1-5 rooms</th>
<th>6-9 rooms</th>
<th>10+ rooms</th>
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<td>18%</td>
<td>26%</td>
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For the most part, when used, travelers are a small percentage of the staff, on average 8%. For the vast majority—86%—they make up less than 20% of the staff.

A few (14%) have a staff that is 20% or more travelers. For 1 community hospital in the South with 10 or more ORs, 50% or more of the staff is temporary.

Overtime

Just over half of respondents, 52%, are using overtime routinely, with 44% saying...
## Average staff turnover rate

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<th>Type of facility</th>
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<td>6%</td>
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<tr>
<td>STs</td>
<td>7%</td>
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<tr>
<td>RNs</td>
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<td>STs</td>
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Note: Turnover was defined as the percent of staff who have left and been replaced in the past year.

## Average number of open positions in ORs

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## What percent of budgeted FTE positions are open?

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<tr>
<td>STs</td>
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## Average number of weeks positions have been open

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<thead>
<tr>
<th>Region</th>
<th>East</th>
<th>Central</th>
<th>South</th>
<th>West</th>
</tr>
</thead>
<tbody>
<tr>
<td>RNs</td>
<td>13</td>
<td>11</td>
<td>11</td>
<td>17</td>
</tr>
<tr>
<td>STs</td>
<td>9</td>
<td>10</td>
<td>8</td>
<td>14</td>
</tr>
</tbody>
</table>

## Do you routinely use agency/travelers to fill budgeted OR positions?

<table>
<thead>
<tr>
<th>Type of facility</th>
<th>Overall</th>
<th>Community</th>
<th>Teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>23%</td>
<td>20%</td>
<td>32%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Region</th>
<th>East</th>
<th>Central</th>
<th>South</th>
<th>West</th>
</tr>
</thead>
<tbody>
<tr>
<td>RNs</td>
<td>20%</td>
<td>13%</td>
<td>22%</td>
<td>47%</td>
</tr>
</tbody>
</table>

Note: Number responding was 75.
**Status of nursing shortage**

An aging population, fewer nurses entering the profession, and an aging cohort of nurses moving toward retirement promise to leave too few nurses caring for too many patients in the years ahead.

Despite some improvement in the labor supply in the past few years, there’s “no empirical evidence the nursing shortage has ended,” says nursing workforce expert Peter Buerhaus, RN, PhD, of Vanderbilt University.

Here are some highlights:

- The US Bureau of Labor Statistics projects more than 1 million new and replacement nurses will be needed by 2012.
- Yet the number sitting for the RN licensing exam fell by 10% from 1995 through 2004, according to the National Council of State Boards of Nursing.
- Older nurses have been a major source of RN employment growth—63% of the growth from 2001 to 2004 was from RNs ages 50 to 64. It will not be long before these RNs begin to retire and leave the workforce.
- Foreign-born nurses also have been an important source of RNs.
- The supply of younger RNs grew by 90,000 in 2003, the biggest jump since 1987. But the growth is unlikely to provide enough new nurses to solve the shortage in the long run.

**References**

American Association of Colleges of Nursing. Nursing shortage fact sheet. [www.aacn.nche.edu](http://www.aacn.nche.edu)


---

**OR staffing trends**

![Graph showing OR staffing trends](source: OR Manager, Inc.)

**Do you routinely use overtime to staff your ORs?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching</td>
<td>60%</td>
</tr>
<tr>
<td>Community</td>
<td>49%</td>
</tr>
</tbody>
</table>

**Use of overtime by number of ORs**

- 1-5 rooms: 50%
- 6-9 rooms: 52%
- 10+ rooms: 53%

—Billie Fernsebner, RN, MSN, and Pat Patterson

Results from the remainder of the survey, including salaries, benefits, and skill mix, will be reported in the October issue.

---

**Salary/Career Survey director**

Billie Fernsebner, RN, MSN, education specialist for OR Manager, Inc, has coordinated the OR Manager Salary/Career Survey for the past 8 years.

**Thank you**

OR Manager thanks its subscribers who generously took time to complete this year’s survey.

We appreciate your part in gathering this information, which will be useful to your colleagues around the country.
Salary/Career Survey

**Enough education resources?**

Educators play an important role in the OR. But overall, 51% of managers say they don’t have enough of them. For small ORs, only about 4 in 10 say their educational resources are adequate.

With almost 90% of ORs hiring RNs without perioperative experience, managers rely on educators to get new employees up to speed.

Educators also help orient the staff to new technology and keep the staff informed about regulatory and safety standards.

By region, 62% of managers in the East and 55% of those in the West said educational resources were not sufficient.

A few, 6%, had seen educator positions decrease.

The number of educators varies widely—36% have none, while 4 facilities reported having 5.

**Are educational resources adequate?**

<table>
<thead>
<tr>
<th>Teaching</th>
<th>Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>46%</td>
<td>58%</td>
</tr>
</tbody>
</table>

**How many educators/staff development staff do you have in the OR?**

<table>
<thead>
<tr>
<th>1-5 ORs</th>
<th>6-9 ORs</th>
<th>10+ ORs</th>
</tr>
</thead>
<tbody>
<tr>
<td>42%</td>
<td>54%</td>
<td>53%</td>
</tr>
</tbody>
</table>

**In the past 2 years, the number of educators has...**

- Increased 10%
- Decreased 6%
- Stayed the same 84%

**Do you consider your educational resources adequate?**

- No 51%
- Yes 49%

---

**What effect has the nursing and anesthesia shortage had on your OR?**

<table>
<thead>
<tr>
<th>Nurses (n = 412)</th>
<th>2004</th>
<th>2005 (n = 317)</th>
<th>Anesthesia providers (n = 407)</th>
<th>2004</th>
<th>2005 (n = 315)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do not have a shortage</td>
<td>49%</td>
<td>44%</td>
<td>54%</td>
<td>56%</td>
<td></td>
</tr>
<tr>
<td>Day of surgery cancellations</td>
<td>NA</td>
<td>1%</td>
<td>3%</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>One or more ORs closed for more than 1 week</td>
<td>6%</td>
<td>4%</td>
<td>14%</td>
<td>13%</td>
<td></td>
</tr>
<tr>
<td>Loss of surgical cases to other facilities</td>
<td>5%</td>
<td>7%</td>
<td>7%</td>
<td>9%</td>
<td></td>
</tr>
<tr>
<td>Longer patient waits for elective surgery</td>
<td>11%</td>
<td>15%</td>
<td>17%</td>
<td>21%</td>
<td></td>
</tr>
<tr>
<td>Extended hours for scheduled cases</td>
<td>33%</td>
<td>34%</td>
<td>31%</td>
<td>32%</td>
<td></td>
</tr>
<tr>
<td>Increased use of overtime to complete schedule</td>
<td>47%</td>
<td>44%</td>
<td>31%</td>
<td>26%</td>
<td></td>
</tr>
<tr>
<td>Increased use of agency/traveler nurses</td>
<td>16%</td>
<td>17%</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Extended hours for PACU</td>
<td>31%</td>
<td>31%</td>
<td>24%</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>Patients discharged home or to surgical floor later in day</td>
<td>23%</td>
<td>24%</td>
<td>17%</td>
<td>15%</td>
<td></td>
</tr>
</tbody>
</table>
Keeping perioperative staff over age 50

Attracting and keeping veteran staff are key to coping with the nursing shortage in the years ahead. The OR Manager Salary/Career Survey asked managers what steps they are taking to recruit and retain nurses over 50.

RNAs over 50 have been the fastest growing group of new nursing recruits in the past few years. By 2010, nearly half of nurses are projected to be over 50, reports nursing workforce researcher Peter Buerhaus, RN, PhD.

One reason older RNs have been entering the workforce is the general high unemployment in the past few years, which has sent some nurses back to work to shore up the family income. They’ve also responded to higher wages hospitals are paying to boost recruitment.

Buerhaus says older RNs are likely to keep working as long as unemployment is high. In the past year, the jobless rate has come down from 6% to 5% in June. It’s not clear whether higher pay alone will be enough to keep them if unemployment falls.

Nurses love the OR

The OR still holds an attraction. One manager wrote: “OR nurses still love the OR and stay. Most have to work and find it easier than floor nursing.”

Flexibility is a major recruitment and retention strategy. Some efforts managers reported include:

- limiting call or eliminating it entirely for nurses over a certain age with a specified number years of service at the facility
- offering flexible hours, such as part-time positions and no weekends and off shifts
- providing support—one facility assigns 1 orderly for every 2 ORs to assist staff with patients and equipment
- offering staff over 50 assignments other than scrubbing or circulating, such as updating the information system, scheduling cases, staffing the preoperative and postoperative phone call program, and cross training to postanesthesia care or ambulatory settings.

Other ideas are offering a fitness program for all staff and evaluating equipment that can help reduce physical demands.

One manager finds harmony among the generations. “Half of our staff is over 50. The workload is shared equally. The older nurses mentor the younger ones while learning new concepts from the younger nurses.”

Hurry-up pace

Though some nurses might want to slow down, the OR schedule doesn’t. The wish of older nurses to pull back clashes with the hurry-up pace expected by surgeons and administrators.

A manager at a small rural hospital in Florida wrote that most of the RN staff, including herself, are over 50.

“The work is demanding, with more equipment needed and too few ancillary staff to help,” she said. “The nurses are tired, and we work late trying to get the schedule done.”

With a handful of surgeons, the hospital has an unpredictable workload, which means sometimes nurses are sent home early. That’s tough for those who rely on a steady income.

This manager sees a widening gap between nurses and surgeons.

“The surgeons push and push to get cases started because to them every minute they are not operating they are losing money,” she observes. There’s a lot of focus on turnover time, which she thinks “is not really necessary and ultimately dangerous.”

Ambulatory surgery centers

Surgery centers are retaining their veteran staff with creative assignments and attention to ergonomics.

Several ambulatory surgery center (ASC) managers noted they place a high value on older workers.

“They are better with ethics, [have] less child care issues, and [are] more flexible,” one manager wrote.

One manager relies on early retirees (ages 62 to 65) for per-diem positions in the OR, holding area, and postanesthesia care unit. She says, “They are excellent workers with exceptional skills. We really have no problem with retention.”

As in hospitals, flexibility is a byword.

The manager of a 5-OR ASC in Nevada reports that 4 of the facility’s 7 RNs are over 50, including herself, and 3 are over 60.

“I try to be as flexible as I can to accommodate them,” she notes. All of them work 48-hour shifts with full-time benefits.

One facility avoids having its over-55 nurses circulate on 2 consecutive days or on both of its high-volume days, if possible.

Several others assign older staff to roles that do not involve direct patient care such as preference card maintenance, medication management, and capital budget analysis or to supervisory rules such as education or being a preceptor to newly hired RNs.

Managers are conscious of physical wear and tear. One asked an occupational therapist to evaluate the effect on staff of moving heavy equipment and patients.

“I requested a written summary to support changes that needed to be made,” she says. “It gave us additional leverage with physician owners.”

In contrast, another manager said her ASC is doing nothing to recruit staff over 50.

“We are spending our recruitment dollars on hiring senior nursing students who, by the time they graduate, have learned a tremendous amount about OR nursing while functioning as an aide. We do the same with STs when we have a need,” she noted.

Reference

Four in 10 respondents to the OR Manager Salary/Career Survey say they have a shortage of anesthesia providers.

For a minority—13%—the shortage is serious enough that they have closed ORs for more than 1 week. About 1 in 5 (21%) has seen longer patient waits for elective surgery. A few (3%, or 9 facilities) have canceled procedures on the day of surgery.

Some report using more certified registered nurse anesthetists (CRNAs), and some say they are not able to provide anesthesia support to nonsurgical areas such as endoscopy and the cath lab.

**Percent closing 1 or more ORs for 1 week or more because of anesthesia shortage by size of department**

<table>
<thead>
<tr>
<th>Size of Department</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5 ORs</td>
<td>5%</td>
</tr>
<tr>
<td>6-9 ORs</td>
<td>21%</td>
</tr>
<tr>
<td>10+ ORs</td>
<td>14%</td>
</tr>
</tbody>
</table>

What’s the outlook for the supply of anesthesia providers?

The number of new CRNAs has risen dramatically while the number of physician anesthesiology graduates is at a plateau.

Last year, the number of anesthesiologist residents in the first year of training declined slightly from the year before and was the smallest group since 1999. They won’t be coming out of training for 3 years.

“I see this as a sign we are not going to be recruiting enough,” says Alan Grogono, MD, FRCA, who has tracked anesthesiology recruitment since 1991. (Data is posted at www.grogono.com/nrmp.)

He noted that shortages are continuing even as the population is aging and the Medicare population is growing, meaning there will be a growing demand for surgery. Demand for anesthesia support is also fueled by the increasing number of surgical sites, including ambulatory surgery centers and office-based facilities.

**CRNA grads double**

On the other hand, the number of CRNA grads has risen 1998, reaching 1,870 this year. The quality of recruits is high, says Francis Gerbasi, CRNA, PhD, of the American Association of Nurse Anesthetists (AANA).

Will more CRNAs help the shortage?

That’s hard to say.

“Clearly, it will take an ongoing effort to maintain growth,” says Gerbasi. In 1990, a government study found 1,500 to 1,800 CRNA graduates would be needed annually by 2010. “We’ve gone past that, and it hasn’t plateaued,” Gerbasi notes, adding that 8 new educational programs are in development.

An unknown is how quickly anesthesiologists and CRNAs will retire. The average age of CRNAs is 46 and is not projected to increase rapidly, reaching only 48 by 2018, according to AANA data.

Gerbasi expects many CRNAs will keep working past age 60.

“The culture of nurse anesthetists is that they tend to work beyond retirement age,” he comments.

Like the rest of nursing, however, nurse anesthetists are challenged by an aging faculty. About 50% of instructors are expected to retire in the next 10 years.

“It will be a challenge down the road, but we think we can meet the challenge,” Gerbasi says. One tactic is to try to interest new CRNAs in teaching early in their careers.

Unlike other nursing specialties, satisfaction among CRNAs is high, and once they enter the specialty, “it’s rare to see them leave,” Gerbasi says.

Nurse anesthetists give 65% of all anesthetics each year in the US and are sole providers in many rural hospitals, AANA says.

The American Society of Anesthesiologists (ASA) and AANA last conducted workforce surveys in 2002. At that time, AANA found a 12% vacancy rate. ASA found almost half of hospitals (47%) said they did not have enough anesthesiologists on staff.
Ambulatory surgery centers (ASCs) face less of a staffing challenge than hospital ORs.

In all, 69% had no open RN positions, and 82% had no openings for surgical technologists (STs). The average number of positions open was 0.5 for RNs and 0.2 for STs.

Only 27% said recruiting is “very difficult,” much lower than the 45% in hospitals, according to the OR Manager Salary/Career Survey.

Vacancy and turnover rates are low. When positions are open, they take less time to fill than in the hospital.

ASCs have an advantage over hospitals in attracting nurses because they generally are open only on weekdays and do not need call coverage for nights, weekends, and holidays. They mainly perform routine elective surgery, and most patients are not as severely ill as those in the hospital.

The majority of ASCs—56%—still do not hire RNs without OR experience. That’s a big contrast to hospitals, where only 12% will not hire RNs who lack experience in surgery.

One ASC manager wrote that many applicants for positions seem to be in the 45- to 55-year-old age group. “They are interested in a slower-paced workload that does not require call,” she said. She uses early retirees for per-diem positions.

The OR Manager Career/Salary Survey for Ambulatory Surgery Centers was mailed in May to managers at 609 ASCs with 111 surveys returned, a rate of 18%. Results of the survey relating to management, including salaries and benefits, will be in the October issue.

### Salary/Career Survey

ASCs report few vacancies, low turnover

#### Average staff turnover rate

- RNs: 4% (n=91)
- STs: 4% (n=86)

#### Is recruiting experienced OR nurses difficult?

- Very: 27%
- Somewhat: 48%
- Not at all: 25%

#### What percent of budgeted FTE positions are open?

- RNs: 4% (n=33)
- STs: 5% (n=28)

#### Does your ASC hire RNs without OR experience?

- No: 56%
- Often: 12%
- Occasionally: 32%

#### Do you offer OR training for nurses?

- Yes, elsewhere: 11%
- No: 38%
- Yes, at the ASC: 51%

#### Do you routinely use overtime to staff your ASC ORs?

- Yes: 35%
- No: 65%

#### Has recruiting become more difficult in the past year?

- No: 40%
- Yes: 59%
Please see the ad for MICROTEK in the OR Manager print version.
Staff incentive program

<table>
<thead>
<tr>
<th>Target: First-case starts</th>
<th>Tier I</th>
<th>Tier II</th>
<th>Tier III</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Baseline</td>
<td>100% of bonus</td>
<td>75% of bonus</td>
</tr>
<tr>
<td>Main OR</td>
<td>71%</td>
<td>85%</td>
<td>80%</td>
</tr>
<tr>
<td>Surgery center</td>
<td>67%</td>
<td>85%</td>
<td>80%</td>
</tr>
</tbody>
</table>

Target: Supply costs per unit of service

<table>
<thead>
<tr>
<th>Target: Supply costs per unit of service</th>
<th>Tier I</th>
<th>Tier II</th>
<th>Tier III</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Baseline</td>
<td>100% of bonus</td>
<td>75% of bonus</td>
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<tr>
<td>Main OR</td>
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<tr>
<td>Surgery center</td>
<td>$2.92</td>
<td>$2.86</td>
<td>$2.87</td>
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</table>

Target: Turnover time (in minutes)

<table>
<thead>
<tr>
<th>Target: Turnover time (in minutes)</th>
<th>Tier I</th>
<th>Tier II</th>
<th>Tier III</th>
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<tbody>
<tr>
<td></td>
<td>Baseline</td>
<td>100% of bonus</td>
<td>75% of bonus</td>
</tr>
<tr>
<td>Main OR</td>
<td>26</td>
<td>23</td>
<td>24</td>
</tr>
<tr>
<td>Surgery center</td>
<td>14</td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>

Bonus amounts for each target achieved

<table>
<thead>
<tr>
<th>Bonus amounts for each target achieved</th>
<th>Tier I</th>
<th>Tier II</th>
<th>Tier III</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-case starts</td>
<td>$175</td>
<td>$131.25</td>
<td>$87.50</td>
</tr>
<tr>
<td>Supply costs/unit of service</td>
<td>$175</td>
<td>$131.25</td>
<td>$87.50</td>
</tr>
<tr>
<td>Turnover time</td>
<td>$175</td>
<td>$135.25</td>
<td>$87.50</td>
</tr>
</tbody>
</table>

Total possible payout every 6 months $525

Source: St Joseph Hospital, Orange, Calif.

Continued from page 1

devolved a 3-tiered program to reward staff members in the 26-room main OR and 13-room outpatient surgery center. Now in its second year, the program provides bonuses for achieving 50%, 75%, and 100% of targeted goals, with a maximum payout of $525 per individual every 6 months.

Joanne Stermer, RN, MBA, CNOR, executive director of surgical services and endoscopy, began by asking the staff what they thought a meaningful incentive would be. They suggested a take-home amount of $300 every 6 months.

Three incentive targets they suggested were:
- improved turnover times
- getting first cases started on time
- lowering supply costs per unit of service (surgical minute).

She and her team then built a case for the incentives with the Human Resources (HR) Department. One stumbling block was that HR didn’t believe all staff members should be paid the same incentive. Instead, they wanted the incentive based on job classification, so an RN would receive more than an environmental services staff member, for example. The OR staff disagreed and said everyone should be rewarded the same amount because they all have to work together to reach the target.

Setting targets

Targets were set by examining a year’s worth of baseline data for turnover time, supply costs, and first-case starts. For example, the baseline for turnover time in the main OR was 26 minutes. The targets were set at:
- 100% of the bonus: 23 minutes
- 75% of the bonus: 24 minutes
- 50% of the bonus: 25 minutes.

Each incentive target was worth a maximum of $175. If 100% of all 3 targets was achieved, staff could be rewarded a maximum of $525 every 6 months (chart).

In the first 6 months, the main OR had significant improvements on all 3 targets. The outpatient surgery center also improved significantly, but the center’s staff found its target of reducing turnover time from 14 to 11 minutes was too aggressive. At the end of the first 6 months, the target was readjusted.

To kick off the first-case-start incentive, Stermer notified every surgeon and anesthesiologist the OR staff would receive a bonus if they met the target. The staff also began gently reminding surgeons and anesthesiologists they could help them earn the incentive by being on time.

“We have made a great improvement by making them aware the staff would be getting an incentive,” she says.

Self-funding the program

Because the OR had not budgeted for the bonuses, Stermer had to make the program self-funding. She determined the program could pay for itself by lowering the supply cost per unit of service by 2%, which was one of the incentive targets. This was enticing to the CEO, she says.

Stermer believes the staff has a major role in controlling supply utilization.

“Management can negotiate the lowest contract price for supplies, but if the staff opens 1 or 2 items they don’t need, costs go up,” she says.

The staff surpassed the goal, decreasing supply cost per unit by 2.1%.

The payout

In the first 6 months, each surgical services staff member in the inpatient ORs received a total percentage payout of 78% ($409.50 for a full-time person). Staff in the outpatient ORs were rewarded with a 76.6% payout ($402.15 for full time). (Payouts are prorated according to time worked during the 6-month period.) The total payout for the 320 staff members totaled $68,853. Those receiving payouts included RNs; surgical technologists; support technicians; anesthesia personnel; and personnel from the surgical prep unit, postanesthesia care unit, sterile processing, and environmental services.

After the incentives were awarded, the inpatient OR staff signed a thank you letter to the vice president and OR committee. The outpatient OR staff thought its turnover time target was unrealistic, which prompted a reexamination of the target.

“This was a key learning experience for us,” says Stermer. “Setting realistic, achievable goals is the key to success.”

Now in the program’s second year, having done the best they think they can with turnover time, the staff plans to concentrate on improving preference card accuracy and keeping supply costs down.

Stars and Pit-to-Peach awards

Daily rewards called Stars are given...
**Human resources**

---

**Does your facility reward staff financially for helping to improve performance or reduce supply costs?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>18%</td>
<td>83%</td>
</tr>
</tbody>
</table>

Total equals more than 100% due to rounding.

**Type of Facility**

<table>
<thead>
<tr>
<th>Community</th>
<th>Teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>16%</td>
<td>25%</td>
</tr>
</tbody>
</table>

**Number of ORs**

<table>
<thead>
<tr>
<th>1-5</th>
<th>6-9</th>
<th>10+</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>19%</td>
<td>23%</td>
</tr>
</tbody>
</table>


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At Piedmont Hospital in Atlanta, Employees win Stars for staying to help finish cases, achieving quick turnover times, and showing teamwork. The hospital has 31 ORs and a surgical volume of 26,000 cases a year.

Employees collect Stars and trade them for free lunches, time off, massages, and other perks. Each award is worth $1, and it takes 15 Stars to get an hour off. Employees can earn more than 1 Star in a day.

A record of each award is kept in the employee’s file. At the time of the annual performance evaluation, managers can see how many Stars an employee has. Thirty to 45 Stars in a year means the employee is a high performer, says OR director Shirley Lewis, RN, CNOR.

The Pit-to-Peach award is given biannually during Perioperative Nurse Week in November and National Nurses Week in May. The award goes to employees who identify a need and fix it with little assistance. Along with a framed certificate, the employee receives a $25 American Express gift check. The award has been given to entire teams, with each member receiving a plaque and a $25 gift check.

The last winner addressed a problem with broken instrument tips. Investigating the cause, the person found not all instrument trays had a mat in the bottom. She worked with the Central Supply Department on her own time to order mats and help put the mats in all trays. There hasn’t been a problem with broken instrument tips since.

“That definitely was turning the ‘Pit’ into a ‘Peach,’” says Lewis.

Another Pit-to-Peach award was given to a group of 5 clinical partners who improved the handling of OR equipment. Often, the partners couldn’t find equipment when the OR staff called for it, even though there were lists in each equipment room. The group came in on a Saturday and revamped the equipment system.

“The Pit-to-Peach is not a reward to motivate the staff,” Lewis explains. “It is to reward motivation the staff has shown.”

**On-the-Spot Awards**

At Bryn Mawr Hospital in Bryn Mawr, Pa, hospital staff, including those in the OR, are given On-the-Spot Awards for service above and beyond normal duties, says OR manager Lynne McGrath, RN, MSN, CNOR. With 8 ORs, Bryn Mawr performs 6,800 cases a year.

Every quarter, each department manager is given a supply of $10 gift certificates to a local supermarket, 10 to 12 for the OR and 6 or 7 for the postanesthesia care unit (PACU).

Best of all, when a staff member receives an On-the-Spot Award, the name is placed in a quarterly drawing held by the Main Line Health System. In the past 2 years, 4 OR staff have received more than $900 each in the drawings.

The idea is to recognize a high performer at the time, not 6 months later. Anyone, not just managers, can recommend a staff member for an award. OR and PACU staff who have received the award include:

- the nurse who volunteered to take on quality improvement when the former QI person wanted to relinquish it after 15 years
- the surgical technologist who got Puddle Guppies and hooked them to 4 suction when a scrub sink water pipe valve broke
- the OR nurse who volunteered to stay over to finish a case or recover a patient in the PACU
- the nurse who took special breast reduction instruments home and engraved them so they wouldn’t get lost
- the nurse who got the program for endovascular abdominal aortic aneurysm procedures up and running
- the OR secretary who worked with the information systems personnel to revise the on-call schedule.

McGrath posts the names of those who receive awards on the staff bulletin board. Recipients also receive a letter from hospital executives, which goes in their personnel file.

The Main Line Health System also has a Performance Plus Award of up to $5,000 for individuals or teams. The OR scheduling coordinator recently won because she was helpful in arranging the schedule so staff members could go to meetings. Managers must submit an application explaining why a person deserves the bonus.

“—Judith M. Mathias, RN, MA

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Patient safety

Fighting fatigue for perioperative staff

Staying for hours to complete cases. Volunteering for extra shifts. Working into the night on call and reporting for a full day’s work the next morning.

They’re part of the life of perioperative staff. But they also contribute to fatigue, an issue of increasing concern for patient safety and the staff’s well-being.

The literature documents the hazards of fatigue. In fact, the long hours some nurses work is one of the most serious threats to patient safety, according to the 2004 Institute of Medicine (IOM) report, Keeping Patients Safe: Transforming the Work Environment of Nurses.

Fatigue saps energy, slows reaction time, leads to lapses in attention, impairs problem solving, and reduces motivation.

In one of the first studies to look at nurse work hours, Ann E. Rogers and colleagues found errors began to rise when shifts exceeded 8.5 hours and increased significantly after nurses worked 12.5 hours in a day.

Long hours also take a personal toll on health and family life (sidebar). They’re part of the life of perioperative staff.

In the OR, call is a major reason for extended hours. Hospitals typically cover off-shifts with staff who are “on call”; that is, available on short notice for urgent and emergent cases. Call staff may work long and unpredictable hours, depending on cases that arrive during that period. If scheduled to work the next day, they can easily work for more than 12 hours at a stretch.

This spring, the Association of peri-Operative Registered Nurses (AORN) approved a guidance statement advising facilities to create call schedules that consider the effect of long hours on patient safety and the staff.

Addicted staffing challenge

For OR managers, preventing long work hours adds to their staffing difficulties. Faced with tight staffing, some ORs are using more overtime and allowing staff to volunteer for extra shifts for premium pay. They’re also competing for staff who have high expectations for flexible hours and working conditions.

Managers know that if they limit staff who work extended shifts—often by choice—others will have to pick up the slack.

Managers and directors we talked to say they’ve begun discussions and are collecting data on extended hours. But they do not yet have formal policies. For the time being, they’re monitoring fatigue from day to day, encouraging tired staff to speak up, and finding ways to cover so they can go home.

“It’s interesting—the staff will talk about all of these patient safety issues,” observes Carol Majewski, RN, MS, clinical director of perioperative services at Dartmouth-Hitchcock Medical Center, Lebanon, NH. “But when we began talking about limiting call shifts for patient safety reasons—which might mean more frequent but shorter on-call shifts—they didn’t want to hear about it. This is a cultural shift, and it’s going to take time.”

Another nursing leader notes that nurses have been slow to think about their own health.

“I think nurses are the last group to look after themselves,” comments Pat Givens, RN, EdM, assistant hospital director for nursing and clinical operations at Vanderbilt Children’s Hospital, Nashville, Tenn, which has drafted a policy to limit nurse work hours.

“We look after our equipment, and hospitals have restricted work hours for residents. Now we need to start looking after all of the team.”

Peds hospital drafts policy

Vanderbilt Children’s Hospital drafted its work-hour-limit policy following discussions at national meetings of the Child Health Corporation of America, a network of children’s hospitals.

Vanderbilt University Medical Center also has discussed fatigue as part of its organizationwide implementation of crew resource management. Borrowed from aviation, crew resource management focuses on safety training through effective team management.

Under the draft policy, nurses’ work would be limited to:

• 16 hours in a 24-hour period
• no more than 4 or 5 contiguous 12-hour shifts without a 24-hour break.

There would be exceptions for mass casualties and other emergencies.

The hospital has been looking at the policy’s potential impact and planning for a transition, says Givens.

Impact is expected to be the greatest in small programs that require a high level of technical expertise, such as extracorporeal membrane oxygenation (ECMO), which provides life support to newborns and children with cardiac and respiratory disease. These programs have fewer staff to share the workload. Yet Givens sees problems in granting exceptions.

“We have to be careful not to speak out of both sides of our mouths by saying extended hours are OK for some but not others. It may be that we will have to look at how we are allocating resources,” she says.

Givens has some data to indicate there have been occurrences related to long hours.

“When you’re holding a child’s life in your hands by calculating medication doses, participating in surgery, and monitoring patients, you have to make sure the industry is safe both for the patients and employees.

“There may be a cost, but there’s a cost the other way, too,” she says.

OR, PACU address fatigue

The ORs and postanesthesia care unit (PACU) at Vanderbilt Children’s have
begun to address fatigue with changes in call practices, notes Donna Williams, RN, MSN, CNOR, administrative director of perioperative and procedural services.

In the ORs, weekday call from 7 pm to 7 am is covered by a night team that receives 40 hours of straight-time pay. The regular staff takes call on the weekdays, which they self-schedule.

“The staff tells us that not taking call during the week is wonderful,” Williams says.

In the PACU, 2 RNs were recently hired for a permanent night shift.

With PACU staff routinely working 12-hour shifts, call became an impossibility, Williams notes, especially if patients had to spend the night in the PACU because of a lack of inpatient beds. If no patients are in the PACU, the night nurses float to other units, such as the emergency department or pediatric intensive care unit. They don’t take a patient assignment but relieve for breaks and provide other assistance.

“The night shift coverage has been a huge satisfier for the PACU nurses,” says Williams, who adds that recruiting for the night-shift positions was not difficult.

### Are 24-hour call shifts safe?

At Dartmouth, Majewski and her staff are discussing 2 work-hour issues:

- Is it safe to have 24-hour call shifts on weekends?
- Should staff be allowed to schedule themselves for 2 12-hour shifts with a call shift in between, as some do for personal convenience?

Staff who work these shifts are unlikely to be called in for long periods because there is in-house staff, she notes. Dartmouth, with 23 ORs, is a Level I trauma center and teaching hospital. It is recognized as a Magnet hospital for excellence in nursing.

The staff self-schedules for call, which works out to 1 weekend in 3 weeks and 1 12-hour or 24-hour shift every third weekend. On weeknights, the call team works for 5% to 7% of the call-shift hours scheduled; in other words, if 100 call hours were scheduled, the staff would work 5 to 7 of those hours.

“Converting these 24-hour shifts to 12 hours would mean more call,” she notes. Majewski collects data on call, including how many hours were worked during call, the length of time worked, and breaks between call stints.

She hasn’t documented safety incidents from long shifts, “but we’re trying to be proactive,” she says. “Even at 12 hours, we have documented there is fatigue.”

To help the staff get rest on call, the hospital, which is in a rural area, has an apartment for OR staff to use. The apartment is a pleasant place to rest and allows the staff to comply with the 30-minute arrival time if called in. There also are sleeping rooms at the hospital.

On a daily basis, the person running the OR’s control desk notes who has worked on call the night before and tries to relieve them.

Majewski encourages the staff to be open about fatigue. For example, when someone says, “I’m exhausted. I was up all night. Can I go home?” she tries to be supportive and let them leave.

Dartmouth is taking steps to encourage staff to be accountable for fatigue. A proposed addition to staff nurse performance expectations is a statement that addresses nurses’ professional responsibility to monitor their personal health.

### Fallout from fatigue

**A hazard to patient safety**

In one of the first studies to look at nurse work hours, 393 RNs completed shift logs:

- Half of the shifts exceeded 10 1/2 hours.
- In 39% of shifts, nurses worked at least 12.5 hours.
- Errors began to rise when shifts exceeded 8.5 hours and increased significantly after nurses worked 12.5 hours in a day.


Staying awake for 20 to 25 hours has the same effect on performance as a blood alcohol concentration of 0.10%, the level of intoxication.


A literature review comparing 8-hour and 12-hour shifts across industries found that while some workers prefer the shorter workweek offered by 12-hour shifts, they experienced fatigue and diminished alertness toward the end of the shift. On the plus side, 12-hour shifts reduced the number of hand-offs from one shift to another, a cause of mistakes.


**A threat to personal well-being**

Employees working fixed night shifts are more likely to be divorced or separated within a 5-year time span than their day-shift counterparts.

Working more than 60 hours a week has been associated with:

- gastrointestinal disorders
- cardiovascular disease
- musculoskeletal injuries.

Employees who work extended hours are more likely to:

- smoke
- rely on stimulants
- have sleep-related problems.

Extended hours are costly. Employers that staff their organizations 24/7 spend an additional $1,181 in health costs annually per extended-hour employee. (Extended hours are defined as working outside 7 am to 7 pm.)

— Circadian Technologies (www.circadian.com)

For medical interns, the odds of reporting a motor vehicle crash and a near-miss incident after an extended work shift were 2.3 and 5.9 times greater, respectively, than after a shift not of extended duration.


Continued on page 24
and fatigue and promote a safe work environment.

Limiting hours is tough, Majewski says, because staffing is tight, and about one-fourth of the staff is travelers. The hospital opened 4 new ORs in the fall, and volume is growing. Recruiting to Dartmouth’s location in rural New Hampshire is difficult, particularly for younger staff who prefer the social life of urban areas.

Teamwork promotes flexibility

Extended hours and call shifts are a concern for community hospitals because they typically rely on call for all of their off shifts. Though there isn’t a formal policy for limiting work hours, Southern Maine Medical Center in Biddeford is keenly aware of staff fatigue and takes steps to manage it.

A strong sense of teamwork among the staff and managers promotes flexibility, says Toni Clark, RN, director of surgical services for the 5-OR department.

“The OR team knows they can leave a note on the message board and take the next day off if they feel too tired to work, and they frequently do so,” she says. The time off is taken without pay or as paid time off.

To help staff earn more paid time off, the hospital grants an additional 1 hour of paid time off for every 8 hours actually worked on call.

Standard call pay is $2 per hour plus time-and-a-half for working on call. Staff receive a minimum of 2 hours of overtime pay when called in.

The entire OR staff takes call, as does staff in the PACU and endoscopy unit. Ambulatory surgery staff take backup call for the PACU. PACU nurses are always scheduled to be off after working on call. Endoscopy nurses take call a week at a time. They mostly work part time and are infrequently called in.

To help cover for staff who ask to leave, the OR has a float team consisting of one person from each job category. The extra staffing, supported by the administration, provides added assistance to the surgeons for case turnover and retractor holding as well as coverage for breaks, lunch, and other absences.

The OR manager, Laura Mullin, RN, works hard to prevent long hours by minimizing the number of cases that run late. Clark calls Mullin “a superb manager” who’s adept at negotiating with surgeons to move cases up to fill gaps in the schedule. Mullin has also led a campaign to start first cases of the day on time to avoid running late. The staff volunteers to stay late to finish cases when necessary so the call team is not burdened in the late evening.

“I have rarely been in a position of insisting that a staff member go home due to fatigue,” Clark says. “They know our flexibility and that their team will work short rather than expect a too-tired person to come in.”

Flexibility and teamwork are a reflection of the hospital’s emphasis on staff retention, Clark says. The OR is fully staffed. The CEO has a volunteer work-life enhancement team of employees that meets with him monthly to develop strategies to promote retention and staff satisfaction. The hospital competes with hospitals in Portland 20 minutes to the north and Boston 1 hour south.

Ten-hour shifts provide call relief

A staff schedule of 4 10-hour work days helped another community hospital provide call relief and reduce overtime. Staff on call are automatically scheduled to be off the following day.

At UPMC Northwest, Seneca, Pa, the OR’s 10 RNs and 8 STs rotate call responsibilities. The hospital, with 5 ORs and an annual surgical volume of about 5,600 cases, is part of the University of Pittsburgh Medical Center.

The change to 10-hour from 8-hour shifts took place in 1997, notes Vivian Todd, RN, CNOR, program director for surgical services. The hospital was seeking to save on overtime, having spent $12,000 on overtime in one 3-month period. The 8-hour shifts also were tough for call.

“Our staff would sometimes work until 8, 9, or 10 pm and possibly come back in the middle of the night,” Todd says.

Now, most of the staff works from 6 am to 4:30 pm. Two teams are scheduled from 7 am to 5:30 pm, one being the call team.

“Very infrequently—only 2 to 3 times a year—do we need more than these 2 teams past 4:30 pm,” Todd says.

Savings on overtime have been dramatic, decreasing to about $1,700 a month.

“Our total overtime hours for the past fiscal year were 635 hours, or about 35 hours per staff person,” Todd says.

Initially reluctant, staff now are happy with the 10-hour shifts, she says. Recently, when there was a discussion about moving some staff to 8-hour shifts, they said they didn’t want to go back.

“They like the extra day off. They also know there are going to get out on time and have a specific day off,” Todd says.

References


“Even at 12 hours, we have documented there is fatigue.”

OR Manager’s Toolbox

Check our web site for practical help on personnel evaluation, codes of conduct, and patient assessment.

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Look under The OR Manager’s Toolbox.
A 200-bed suburban New Jersey hospital received a 2004 Malcolm Baldrige National Quality Award July 20 at the White House.

Robert Wood Johnson (RWJ) University Hospital at Hamilton was 1 of 4 organizations to receive the prestigious award this year—and the only one in health care.

Only 3 other health care organizations have received the award—2 hospitals and a health system—since the program was established in 1987 to jumpstart the growing US quality movement. The award honors organizations that are role models for quality improvement.

The OR’s achievements, which contributed to winning the award, included reducing cost per case by $100 through reprocessing of single-use devices and switching group purchasing organizations (GPOs). Every employee is engaged in meeting the OR’s strategic objectives.

Deb Baehser, RN, MHSA, vice president of patient care services, says applying for the Baldrige award helped the hospital improve significantly while also being the fastest-growing hospital in New Jersey. The hospital has 9 ORs and performed 8,600 procedures in 2004.

“The Baldrige process is an evidence-based path to performance excellence and quality,” Baehser says. “It helped us sharpen our focus on service excellence and quality improvement in the total organization.”

Top-down, bottom-up management

The hospital’s strategic direction involves careful top-down, bottom-up alignment of initiatives and employee goals.

It begins with senior leadership’s commitment to service excellence and performance improvement, Baehser says. All strategic planning and quality improvement stem from the organization’s mission, vision, values, and 5 Pillars—factors the hospital deems critical to its success: people, service, quality, finance, and growth.

After senior leaders set the year’s strategic plan, objectives, and goals, department managers identify their staffs’ role in meeting them. Managers propose their departmental goals back to the senior leadership team, which ensures all organizational goals are assigned and departments have the resources they need.

“As a director, I love the clarity and structure that comes from aligning goals throughout the organization,” says OR director Barb Lee, RN, BS, CNOR.

Margin management

In 2004, the hospital set margin management—increasing revenue—for the OR as one of its strategic objectives.

A team made up of the hospital’s chief financial officer, Baehser, Lee, the assistant vice president of finance, the director of materials management, and a surgeon representative developed an approach to increase revenue and volume and decrease expenses.

“One reason margin management became a strategic objective for surgical services is because of competition from freestanding facilities,” Lee says.

To increase revenue, the assistant vice president of finance identified the top 10 procedures for volume and profit, most of which were in orthopedics. The team then devised strategies to increase orthopedic volume and met with orthopedic surgeons individually and as a group.

“We found out how we could better meet their needs for growth and enhance equipment and scheduling,” Baehser says.

Five orthopedic surgeons also presented a community seminar about total joint replacements at the hospital’s Center for Health and Wellness. More than 100 people attended.

Tackling OR costs

The team developed tactics to reduce the OR’s supply and equipment costs, achieving the goal of reducing the cost per procedure by $100. The tactics included:

- switching to a GPO that got them better pricing
- changing vendors and products for certain items and implementing a tracking system for instrument trays
- reprocessing single-use instruments through a third-party reprocessor, a company that resterilizes the items and returns them for reuse.

The reprocessing initiative saved almost $50,000 in 9 months, Lee says.

“We had to get buy-in from the surgeons before implementing the reprocessing initiative,” she notes. “We involved them early on, sharing literature and setting up information sessions with our vendor representative.”

The vendor representative also instructed the nursing staff about which items were appropriate to reprocess and how to prepare these items for the reprocessor.

Baehser explains that the Baldrige model provides a framework for this kind of improvement because it requires the hospital’s strategic objectives to be deployed from top to bottom.

“We had the chief financial officer sitting with us and driving the margin management initiative,” Baehser says. “Having him there showed our staff that this priority was key to our success.”

Engage every employee

Another key to success is involving employees in performance improvement.

“Employees have input into every aspect of planning,” Lee says. “In the OR, where we’re usually ‘behind closed doors,’ this is especially empowering to our managers and staff.”

The hospital has a tenet called E³ (Engage Every Employee) that incorporates staff input into setting and achieving departmental goals.

“Every employee in the hospital—all 1,700 of them—signs a commitment that aligns them to one of our 10 strategic objectives,” Baehser says.

For instance, in line with the OR’s strategic objective to reduce or maintain the budgeted cost per case, each OR employee’s E³ commitment was “frugal...
Please see the ad for
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in the OR Manager print version.
use of OR supplies and reprocessing.”

Each employee signs a card making this commitment. On one side are the hospital’s mission, vision, and values. On the other side, handwritten, are the organization’s top 5 organizational goals for the year, the OR’s strategic objective, and the employee’s E²³³³ commitment. Lee and the OR employee sign the card, which goes in the plastic sleeve with the employee’s name badge.

**Taking initiative**

Several programs encourage employees to take initiative and be innovative.

One program is shared governance. Nurses from each unit participate in shared governance, as do the infection control and materials management staff.

Two patient safety ideas that came from shared governance teams:

- Reduce hospital-acquired urinary tract infections from Foley catheters. The group performed a 6-month trial of silver-coated Foley catheters, which have been shown to reduce hospital-acquired urinary tract infections. In the trial, the infection rate dropped by 50%.
- Reduce blood culture contamination. The group changed the process of obtaining blood cultures, eliminating an intermediary transfer step. Now the blood cultures go directly from a yellow-top tube into a Microscan processing machine.

**Recognition and rewards**

RWJ-Hamilton expects employees to contribute to process improvement (PI)—and rewards them for successes. Among the recognition programs:

- Employees are evaluated and awarded bonuses based on meeting their department’s PI goals. On a quarterly basis, employees receive up to 5% of their wages for that quarter, Baehser says.
- The hospital recognizes loyalty with salary increases and longevity benefits for nurses who have worked there for 20 or more years. Benefits include a flat increase in the hourly wage and no holiday or on-call commitments.
- Managers nominate employees weekly to receive a handwritten note at home from an executive. The note thanks them for a specific time when they delivered “excellence through service.” For instance, a unit secretary in same-day surgery received a note for her problem solving and follow-up when the hospital launched a new order-entry system.

“This means so much to my staff,” Lee says.

Employees are required to uphold and deliver the hospital’s 5-Star service standards:

- a sense of ownership
- commitment to customers
- commitment to co-workers
- courtesy and etiquette
- appearance
- communication
- privacy
- safety awareness.

These standards are used to hire, train, coach, and evaluate staff to achieve consistent, service-oriented behaviors, Baehser says.

The OR has a waiting list for RNs. The RN retention rate is 97.5%, the vacancy rate is 7.5%, and the turnover rate is 6.6%, Lee says.

**Communicating results**

The hospital relies heavily on information technology to support quality improvement initiatives. Computerized systems and web-based programs provide information to support decision making.

“Our hospital is a data-driven culture,” Baehser says. She notes that giving employees understandable data on key performance indicators is key to keeping them engaged.

Executives review a Balanced Scorecard dashboard based on the 5 Pillars weekly. The dashboard, with easy-to-read graphs, also is disseminated to all employees. Each quarter, executives present achievements for the 5 Pillars at employee forums on all shifts.

**Benchmarking and scoring**

Complaints are viewed as “gifts” to drive performance improvement, Baehser says.

The hospital collects data from patient satisfaction surveys. Nursing leaders also make daily rounds on all new admissions and call discharged patients to collect feedback. Patient comments are posted on the hospital’s Intranet as feedback for managers and staff.

The hospital benchmarks with organizations inside and outside of health care, including past Baldrige recipients such as SSM Health Care, St Luke’s Hospital of Kansas City, Ritz-Carlton Hotel Co, and Clarke American Checks, Inc.

“We also aggressively benchmark within the Robert Wood Johnson Healthcare System and network and seek comparative data within the health care industry,” Baehser says.

Despite being named by a Gallup survey in 2004 as having the best hospital, best nurses, and best technology in its market, RWJ-Hamilton is not about to slow down. Its motto is to raise the bar “to a higher standard” for all customer groups.

“Superior performance in market-share growth and customer satisfaction are a direct result of our Excellence through Leadership System, which continuously raises the bar,” Baehser says.

“This is a journey where we continue to learn. We never settle and think what we’re doing now is OK. We must keep raising our targets and goals.”

—Leslie Flowers

Leslie Flowers is a freelance writer in Indianapolis.


**Are we making progress as leaders?**

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**OR Business Management Conference planned for May in Austin**

The 2006 OR Business Management Conference is scheduled for May 10 to 12 at the Hilton Austin in Austin, Tex.

At this year’s conference in Tampa, Fla, attendees were polled for the city of their choice, and Austin received the most enthusiastic response.

“We are pleased that we have been able to select this site for the 2006 conference,” said Elinor S. Schrader, OR Manager president. “There was excitement about being able to visit Austin, the Live Music Capital of the World. You’ll be able to tune into country, rock ‘n’ roll, blues, jazz, and Tejano music in the Sixth Street Entertainment District, just a few blocks from the Hilton.

“We were pleased to be able to secure the Hilton, which is centrally located downtown with excellent meeting space for our conference.”

**Focus on financial aspects**

The state capital of Texas, Austin is home of the University of Texas and gateway to the Texas Hill Country. A major attraction for nature lovers is watching the bats at dusk as they take flight from beneath the Congress Avenue bridge.

This will be the 7th annual OR Business Management Conference, which attracts OR personnel concerned with the financial aspects of the OR. The conference offers 4 preconference seminars, 4 general sessions, and 12 breakouts. Participants include OR directors, medical directors, business managers, materials management personnel, purchasing agents, and others concerned with the financial success of the OR. A track is offered on OR design and construction.

Abstracts for presentations are invited, due by Nov 1. (See article on how to submit abstracts on this page.)

To learn more about Austin and plan your trip, go to austintexas.org.

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**Updated management competencies book includes patient safety issues**


Authored by Billie Fernsebner, RN, MSN, this classic reference includes 18 core competencies related to the management of the OR. Each competency includes measurable criteria, related competencies, key concepts, learning options, learning plans, and references. Articles from OR Manager that relate to each competency are included.

First published in 1996, the book has been updated to reflect the changes in the health care environment that affect the OR, according to Fernsebner. Eleven OR directors reviewed the second edition and made suggestions for revisions and additions.

**New patient safety competency**

One new competency on patient safety has been added. In past editions, patient safety issues have been included under competencies related to risk management, clinical practice, and technology management. The increasing focus on patient safety led to a separate competency, “Creates a culture of patient safety in the perioperative areas.”

New material has been added to the “key concepts” sections of many competencies as well as the learning options sections. References have been updated with the inclusion of web sites related to specific competencies.

**Competencies for Management of the Operating Room** is designed to provide the structure needed for orientation to the role of OR manager as well as to be a valuable reference for experienced managers.

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**Share successes at 2006 meetings**

Share your successes at the conferences of OR Manager, Inc. Send proposals of about 500 words describing the session you wish to present. Sessions are approximately 1 1/2 hours long.

**Managing Today’s OR Suite**

**Nov 8 to 10, 2006**

**Orlando, Fla**

Managing Today’s OR Suite focuses on practical topics related to management of surgical services, such as achieving greater efficiency, management of information, leading and developing staff, and keeping costs under control.

The keynote address and general sessions feature nationally known speakers who have important messages for surgical services directors. If you wish to suggest a general session speaker, please obtain as much information about the person as you can, such as the speaker’s title, organization, address, and phone number.

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**OR Business Management Conference**

**May 10 to 12, 2006**

**Austin, Tex**

The OR Business Management Conference emphasizes financial management, materials management, OR technology/equipment management, and OR design and construction.

The deadline for proposals and suggestions for both conferences is Nov 1.

Fax or e-mail proposals to Billie Fernsebner, RN, MSN, education director, OR Manager, Inc, at 303/442-5960 or bf Fernsebner@ormanager.com. (Please do not send PowerPoint presentations.)

If you have questions, please call 303/442-1661.
Taking supply management to next level

Part 2 of a two-part article on improving supply chain management. Part 1 appeared in the August issue.

Supplies account for a major chunk of an ASC’s spending. A center may spend from 16% to 30% of its operating budget on surgical supplies, depending on the size and mix of procedures.

An ASC needs the right supplies at the right price in the right place at the right time—without having more inventory on the shelf than it needs. Striking that balance requires a good system and a dedicated effort.

In the second part of this 2-part article, ASC managers, consultants, and suppliers share strategies for managing the ASC’s supply chain. Part 1 covered initial steps for improving the supply chain. In this installment, they suggest how to take supply management to the next level.

Ask suppliers for help

Your distributor and group purchasing organization (GPO) have resources that can help.

“I suggest holding your distributor rep accountable for providing data you need to manage your supply chain,” advises Dawn McLane-Kinzie, RN, MSA, CASC, CNOR, of NSC Aspen Health Care, a Chicago-based ASC management and development company.

Distributors should be able to provide reports on supply usage and back orders. They should make sure you’re using your GPO contracts for as many purchases as possible. Distributors also have consultants who can advise you on setting up a storeroom, setting par levels, and figuring out how often deliveries are needed.

GPOs not only negotiate pricing but can help monitor prices you are getting. When was the last time you asked your GPO to audit your pricing?

“You GPO will do this for free as a member service,” notes consultant George Puckett of Choice Systems Inc, AmericaSourceBergen Technology Solutions, who teaches supply chain seminars for the American Association of Ambulatory Surgery Centers (AAASC).

Step up to technology

Distributors and GPOs offer no-cost or low-cost technology tools that can help their customers and members with supply management.

MedAssets, which claims to be the largest GPO in the ambulatory surgery market with about 1,700 members, has an Internet-based catalog where members can look up their contract pricing, with the distributor markup, to see what price they should be paying.

LeeAnn Puckett, materials manager for Evansville Surgery Center’s 2 ASCs in Evansville, Ind, says the MedAssets online catalog enables purchasing coordinators to check pricing before they place orders.

“If we see a discrepancy, we can ask the manufacturer or distributor about it. It enables us to get to the root of the problem faster rather than creating credits and rebills,” she notes.

She can also see if Evansville is taking advantage of its contracts and has consolidated enough of its purchasing volume to qualify for better contract pricing.

Distributors Medline and Cardinal have web portals where customers can search for products, see availability, and order electronically. Customers can see their monthly supply usage, which can be used to set par levels.

“The Internet is available to just about everybody. We believe it’s the easiest way for ASCs to order their supplies,” says Karen Scott, RN, vice president of Medline’s ASC division.

More than 70% of line items its ASC customers order weekly go through cardinal.com, says Mike Orscheln, Cardinal’s vice president and general manager of Medical Products and Services.

Internet ordering is more accurate than either paper or phone ordering, he adds.

“Orders are cleaner. There are fewer errors because the system won’t let you order the wrong thing. That saves the time and energy of having to return products,” Orscheln points out.

Electronic tools are a strategy companies and GPOs are using to build customer loyalty.

“In these days of shrinking margins and fierce price competition, good suppliers are looking for ways to earn your busi-
Ten steps to better management

1. Get your staff involved. Educate staff and physicians about supply costs and trends. Have every staff member assist with steps such as updating preference cards and checking for supply sterility and out-dates.

2. Maintain accurate preference cards. They are a key driver of cost and efficiency.

3. Appoint a materials manager with responsibility for supply management.

4. Have a well-organized storeroom, with labeled shelves and bins and par levels set.

5. Have internal controls for purchasing and receiving. This includes authorization and approval of purchase orders and proper valuation of the supply inventory, including accurate quantities, costs, and descriptions of items.

6. Perform a regular inventory count. The count is the basis for accurate valuation of an ASC’s inventory and the basis for accurate case costing and financial reporting.

7. Partner with your distributor and group purchasing organization, which should be able to provide reports and supply management tools.

8. Use electronic ordering, either on the Internet or through electronic data interchange (EDI).

9. Have a vendor access policy to manage activity of sales personnel. Make sure the policy is monitored and enforced.

10. Use an objective, systematic process, such as value analysis, for making purchasing decisions. (See December 2004 OR Manager.)

Put it in writing

If you haven’t already, start putting inventory records in a spreadsheet or at least on paper, Puckett recommends.

“You can’t make effective decisions unless you have records,” he says. “You don’t need fancy technology. A spreadsheet or paper journal is fine. Just start tracking basic order and inventory information.”

Too often, an ASC’s inventory records exist mainly in the supply manager’s head. Only the supply manager knows how much is on hand, when to reorder, and where supplies are kept. That’s hazardous because when that person is absent or leaves, the inventory system goes too.

For each product, record the date ordered, supplier, price, unit of measure (case, box, vial, etc), date received, quantity received, whether the product is on a group purchasing contract, and the price paid. Leave room for notes about special requirements.

“These journals will allow you to analyze your purchase history, usage patterns, and supplier performance and reliability,” he says.

Look for opportunities

“Just the process of recording the information will get you in the habit of thinking about what to do with the data,” Puckett says. “Soon you’ll be thinking of new information you want to collect.”

The first 2 things to look for:
• duplicate products
• dead stock

How many products do you have, such as catheters, that accomplish the same purpose? Are there opportunities to consolidate?

“You probably can’t force standardization,” he says, “but you can make the business case for standardization.”

To make a business case, document how many brands of a product you have on hand and how much you paid in total. Then estimate how much you could save if you standardized to 1 or 2 brands. Display the information side by side in a table or chart. Once administrators and physicians see the numbers, “most will get on board pretty quickly,” he says.

Another area to look at—products that aren’t moving. What’s sitting on the shelf that you’re not using?

“This is money tied up in inventory you don’t need,” he observes. “If you keep your records up to date, you can often react quickly enough to return products to your supplier or sell them to another facility that could use them.”

Use your journals to start setting supply management targets such as reorder points and maximum stock levels.

Look at the big picture

If you focus only on price, you could be overlooking opportunities for inventory savings, advises George Puckett.

“The price difference on commodity...”
items now is minimal,” he says.

When negotiating with companies, ask what other benefits they can bring that could help you manage your inventory. That might actually yield more savings than a few cents in price.

“There is an adage: For every dollar you spend on a product, you spend another dollar managing it,” he says. “While you’re fighting to get a penny off on a product, there’s a dollar lying on the table that you could get with better inventory management.”

For example, in exchange for your business, will a company give you a small quantity of an item at the big-box price? That saves storage and inventory management costs.

Will a vendor agree to consignment so you don’t pay for products until they’re used? That saves you the cost and hassle of storing and returning supplies that are obsolete or aren’t moving.

Will your supplier help you analyze how much stock you need on hand? Most ASCs probably turn their inventory over 9 to 12 times a year—about once a month, Puckett estimates. (To calculate your inventory turns, divide your total annual supply spending by your on-hand inventory. For example, if you spend $250,000 on supplies annually and have $50,000 on hand, your inventory turns are 5. That means inventory is being replaced only 5 times a year.)

Yet most ASCs get deliveries at least once a week. That means they are keeping much more inventory than they need. Think of the money that would be freed up if you reduced inventory. In the example above, increasing turns from 5 to 10 would reduce on-hand inventory from $50,000 to $25,000—saving $25,000, or 10% of your supply budget.

Shop around for companies that will help you achieve this, he suggests.

**Do your ABCs**

To get the most bang for your buck in supply management, classify supplies into A, B, and C categories according to their volume and cost (graph):

- A items = 5% to 10% of items that make up 70% to 80% of your costs
- B items = 30% of your items and 15% of your costs
- C items = 50% to 60% of your items and 5% to 10% of your costs.

Then focus on your big-ticket A items. Managing these will have the greatest impact on your spending. Later, if you have time, move on to less costly B and C items.

**Consider procedure packs**

Procedure packs can save time because most supplies needed for a case are assembled in one kit. This means the staff does not have to gather and open multiple packages.

Cardinal Health says about 70% of its ASC customers use custom packs. Medline estimates that, on average, 30% to 40% of an ASC’s supply spending is for procedure packs.

One ASC manager who analyzed packs versus pulling individual supplies for bilateral augmentation mammoplasty, found a small 3-minute time savings in pulling for the case. The larger savings, 19 minutes, came in opening for the case, noted Joan Culberson, RN, administrative director of the Museum District Aesthetic Surgery Center in Houston, who spoke at the AAASC meeting in March in Reno, Nev. Considering the OR room cost and lost revenue, the time savings can be significant.

LeeAnn Puckett is sold on packs.

When she came to Evansville 4 years ago, the only packs used were for eye surgery and linens. She calculated the cost for the center to assemble its own packs. She also solicited bids for packs for the major procedures and determined packs would be cheaper. “Overall, we think it’s a significant savings in time and money,” she says.

There’s a caveat—pack contents have to be monitored diligently. Evansville reviews its packs every 6 to 12 months. “We see if we are throwing items out or pulling extra supplies and make revisions,” she says.

The packs have also simplified charging. Evansville still does line-item billing. With packs, there is one charge versus multiple charges for individual items.

**Generic or specialty?**

It’s important to differentiate between custom packs and generic specialty packs.

Custom packs are individualized to a surgeon or surgery center and require a
purchase commitment of 6 to 12 months. Generic packs, on the other hand, contain supplies common to a procedure, such as knee arthroscopy, but are not individualized. They don’t require a commitment and are less expensive than custom packs.

“These generic packs are a cost-effective alternative and are easy to get from the vendor,” notes Marye Walker, CPA, assistant vice president of financial operations for Symbion Healthcare, a Nashville, Tenn-based company that owns and manages surgery centers. She spoke on inventory management at the Federated Ambulatory Surgery Association meeting in May in San Francisco.

Investigate bar coding

Some ASCs are adopting bar code technology to manage their supply chain. Evansville Surgery Centers are installing a bar coding system from Cardinal that will enable them to scan bins or a bar code catalog with a small device that looks like a key fob. Once inventory has been scanned and the order is ready, the scanner docks to the computer, uploads data to the distributor’s Internet-based ordering system, and creates the order. The ASC can review the order online, verify pricing, and send it through.

LeeAnn Puckett thinks bar coding has an advantage because it eliminates the need to enter the supply order twice. Par levels can be difficult to set in an ASC, she notes, because case types and volume may fluctuate from week to week.

Medline’s Scott says she hasn’t seen many ASCs implement bar coding. “I’m not sure bar coding is going to fix supply chain ills,” she says. “We believe technology is more Internet based than scanner based.”

Staff compliance can be a problem with bar coding, she notes. Staff may not take time to scan supplies when pulling them so they can be deducted from inventory.

Medline touts its consignment program for supply management. With consignment, the center doesn’t pay for supplies until they are used. The company monitors supplies that aren’t moving and removes them from inventory, which means the ASC doesn’t bear the cost of obsolete supplies, Scott says. 

George Puckett will speak at a materials management seminar for the American Association of Ambulatory Surgery Centers Oct 7 in Atlanta. Information is at www.aaasc.org.

‘Low Carb’ Benchmarking

Benchmark your supply costs for your high-cost surgical procedures.

We’re cutting the carbs. From the thousands of cases that OR Benchmarks has benchmarked over the past nine years, we have identified surgical supply cost drivers.

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New College of Surgeons statements on retained items, blunt suture needles

The American College of Surgeons (ACS) issued statements in August on:

- preventing retained foreign bodies after surgery
- blunt suture needles.

The first statement urges organizations to take steps to prevent retained items through good communication and consistent application of standardized processes, among other steps.

The second statement notes that cuts and needlestick injuries occur in 1% to 15% of operations, especially suturing of fascia. ACS says it believes blunt suture needles should be available in various sizes and with a range of suture.

The statements will be published this fall in the Bulletin of the American College of Surgeons. For information, phone Sally Gameski at ACS at 312/202-5409.

New cleaning process can rid instruments of CJD, study shows

Scientists at the University of Edinburgh in Scotland have developed a process using radiofrequency gas plasma that can rid surgical instruments of prions, the hard-to-remove infectious agents that cause Creutzfeldt-Jakob disease in humans, according to the Journal of General Virology. The study found the RF gas-plasma technique effectively removed contamination to levels a thousand times lower than achieved by existing methods.

Interestingly, the researchers, using an electron microscope and x-ray technology, also found that 14 of 17 used instruments reprocessed by conventional methods had multiple areas of contamination remaining. Soaking followed by RF gas-plasma treatment removed the debris.

http://vir.sgmjournals.org/cgi/content

Beta-blocker therapy benefits high-risk surgical patients

Perioperative beta-blocker therapy has been widely advocated for cardiac patients having noncardiac surgery despite limited evidence on its benefits. A new study involving 329 hospitals and nearly 783,000 patients has shown the relationship between beta-blocker treatment and risk of death in patients having noncardiac surgery varies directly with cardiac risk.

In low-risk patients, beta-blocker treatment showed no benefit and possible harm. Among high-risk patients, beta-blockers were associated with a reduced risk of in-hospital death.


What’s best way to measure case cancellation rate?

A new study finds the usual way of measuring the rate of cancelled surgical cases—dividing the number of cases cancelled over several months by the total number of cases scheduled during that same period—is inaccurate.

“The error is surprisingly large, much bigger than we had expected,” says Franklin Dexter, MD, PhD, researcher at the University of Iowa, Iowa City.

Another method is nearly as simple and gets the correct answer, he says. The method involves calculating the number of canceled and performed cases during each 4-week period, transforming each period’s cancellation rate, and applying Student’s t-test.


New law to create national database on health care errors

A bill signed July 29 by President Bush will create a national patient safety database. The law seeks to encourage health care providers to report errors voluntarily to patient safety organizations, which will compile and analyze the data. The patient safety organizations will contract with the providers to identify trends and develop proposals to prevent future errors. The data will not identify specific patients, providers, or persons who report errors. Patients could not use the data as evidence in malpractice lawsuits or other litigation.

—www.kaisernetwork.org