Cleaning audits lead to better environmental hygiene

Environmental hygiene is an ongoing concern in all hospitals because of its role in patient safety and infection control. Standardized processes can greatly improve the efficacy of OR cleaning, but continuous monitoring is needed to ensure compliance with those steps.

Inconsistent cleaning processes, staff turnover, new equipment, and unclear expectations are some of the hurdles that get in the way of thorough OR cleaning. Pathogens are frequently transported between hard surfaces and hands to patients where they can cause infections in both patient rooms and the OR. To help reduce the risk of infections, Sacred Heart Medical Center RiverBend in Springfield, Oregon, began measuring and improving OR cleaning levels in 2009. Sacred Heart is part of the PeaceHealth system, which operates 7 hospitals in Alaska, Washington, and Oregon and has a strong commitment to patient quality and safety. The hospital’s 28 ORs are used for the following types of surgery: general, comprehensive gastroenterology, or-

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Use of refined protocols reduces pressure ulcer rates

Each year, 2.5 million people in the US develop pressure ulcers, according to the Agency for Healthcare Research and Quality (AHRQ). Surgical patients are at especially high risk because of immobility during long procedures and anesthesia that blocks sensitivity to pain and pressure.

The Centers for Medicare & Medicaid estimates that each pressure ulcer adds more than $43,000 in costs to a hospital stay, totaling $11 billion per year. Medicare now considers Stage III and IV pressure ulcers a health care-associated condition and will not pay more for the treatment of patients who acquire them in the hospital.

These are compelling reasons for perioperative nurses to be proactive about protecting their patients from pressure ulcers. Currently, however, there is no standard or tool for identifying surgical patients at risk.

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Performance improvement

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Infection prevention

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Editorial

As the holiday season approaches, I’m aware that it will soon be time for my annual review—not only my job performance but also my personal goals.

I’ve long had a tradition of reflecting on each year’s milestones and continuing the practices that serve me best. I consider this process “evolution” rather than “making resolutions.”

In January I was fortunate to join OR Manager and work closely with founding editor Pat Patterson before she retired in March. Following in Pat’s footsteps has been humbling, to say the least. But Pat was generous with her time and knowledge, and she continues to be a valuable behind-the-scenes resource to OR Manager.

In the publishing world, we’re always working on several issues simultaneously, which is why several of Pat’s articles and editorials appear in the 2013 issues. In addition to this valuable content, Pat left a wealth of resources, sources, and ideas to use for the future.

With other fine articles by Judy Mathias, MA, RN, our clinical editor, as well as Cindy Saver, MS, RN, Paula DeJohn, and several other contributing writers, we continue to publish relevant, timely content. We’re committed to maintaining the high level of quality OR Manager readers expect, and with the staggering number of changes afoot in healthcare, it’s safe to say we will never lack for ideas.

For nearly 9 years before joining OR Manager, I was managing editor of Surgery News, a monthly newspaper published for the American College of Surgeons (ACS). It was exciting to be involved in the launch of that publication and to help it grow over the years.

I’m grateful for that experience and for the ongoing help I receive from the ACS, which is a valued resource for OR Manager; we regularly report on developments in surgery, and in 2014 we’ll feature some of the highlights from this year’s annual Clinical Congress.

Highlights of our own OR Manager Annual Conference, held in September, were featured in the November issue, and we’ll recap some of that meeting’s presentations and posters in upcoming issues. Also on tap for 2014 is our OR Manager Business Management Conference (see p 5). Planning for next year’s OR Manager conference is also underway, and that program promises to be an enriching experience for new and seasoned perioperative leaders alike.

The closer we get to the end of the year, the harder it is to find time for maintenance activities like continuing education, but our 1-hour webinars are well worth your time. In December you’ll learn how a South Carolina surgery center adopted the World Health Organization’s Surgical Safety Checklist, an endeavor that posed challenges different from those faced by hospitals. And the first webinar in 2014 will focus on developing a business plan for a preoperative center. Find out how good decision making can improve not only the patient’s experience but also the financial performance of your facility.

Being editor of OR Manager has been an enriching experience for me, and producing a publication that furthers the careers of our readers is high on my list of 2014 goals. As this year draws to a close, I hope you will find a few quiet moments to assess where you are with your goals. If there’s anything OR Manager can do to help you achieve them, please let us know.

—Elizabeth Wood
ewood@accessintel.com
Register before January 22 and save $100!

Join us to increase your knowledge of OR processes, develop ways to increase efficiencies in surgical services, and network with colleagues during the 2014 OR Business Management Conference. The focus of this conference is to develop critical thinking skills as well as understand cost components and overall financial management of the OR.

There will be several workshops and breakout sessions included in this 2.5 day conference. The opening keynote speaker will be Dr. Michael Hicks, MSMD, MBA, CEO, EmCare Anesthesia Services, presenting on The Future of Perioperative Medicine.

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- And more!

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www.ormanager.com/managementconference
The upcoming OR Business Management Conference provides a timely opportunity for OR business managers and surgical services directors to learn what they can do to optimize their hospitals’ resources—especially in the current climate of ever-tighter budgets and reimbursement concerns.

The conference, which will be held February 11-13, 2014, at the Hyatt French Quarter in New Orleans, expands on the workshop held in April this past year. More than one-third of respondents to the 2013 OR Manager Salary/Career Survey said they have a business manager responsible for financial analysis, budgeting, and purchasing. And an in-depth look at business managers’ influence on the bottom line makes a compelling case for the growing importance of this role in the perioperative environment (OR Manager, November 2013, pp 16-21).

The conference will offer half-day workshops and numerous breakout sessions on supply chain management, Lean processes, effective purchasing strategies, and more. During this intensive, interactive program, attendees will get the perspectives of both expert speakers and their peers while exploring ways to analyze and improve efficiencies, processes, and interpersonal relationships.

Case studies will illustrate the successes and failures of revenue management, supply chain cost and utilization, surgeon scorecards, and block time, to name some. Speakers will share tools developed at their facilities to optimize OR use, analyze costs using evidence-based analysis, and effectively measure performance. Attendees can try out some of these tools through small-group problem-solving exercises.

Staffing models will also be addressed, notably in the keynote presentation by Michael Hicks, MS, MBA, CEO, with EmCare Anesthesia Services, and in a breakout session on aligning staffing to demand by Eileen J. Walsh, MSN, senior manager at Winston & Associates.

Healthcare attorney Keith Siddel, JD, PhDc, MBA, CHC, will guide attendees through the latest labyrinth of reimbursement changes to help them receive proper payment for services. In a separate session, he will also demonstrate use of the Google Glass and explain how this new technology is being explored for use in the healthcare setting.

Also along the lines of new technology, Rohit Inamdar, MSc, senior associate/medical physicist with the ECRI Institute, will discuss imaging systems for hybrid ORs.

Although many sessions will focus on the nitty gritty of good business practices, other aspects of OR management will also be included in the program—in particular, successful partnering with physicians. Closing speaker Girard F. Weiser, MD, PhDc, MBA, CHC, will discuss partnerships with surgeons. Using examples from recent implant contracting projects, he will equip attendees with approaches they can use to leverage support for new endeavors at their hospitals.

For more information and to register, go to www.ormanager.com/managementconference.
Performance improvement

**Pressure ulcers**  
Continued from page 1

operative patients at risk for pressure ulcer development. The scale should have its first validation within the year. AORN has partnered with Munro and created a task force for further development of the scale.

OR Manager spoke with Munro and 3 other perioperative nurses who are tackling the problem of pressure ulcers in their hospitals.

**Risk tool needed**

Many perioperative nurses use the Braden Scale for predicting a patient’s risk of acquiring pressure ulcers, and although it’s a good tool, it was not intended for use with perioperative patients, says Munro, perioperative educator at St John’s Health Center, Santa Monica, California. The Braden Scale, developed in 1987 for patients in long-term care settings, does not take into consideration the many unique factors related to patients who undergo surgery and anesthesia, she explains.

The Munro Scale takes less than 3 minutes to complete and triggers the nurse to implement preventative measures that may reduce patients’ pain and potentially save hospitals thousands of dollars.

The Munro Scale’s emphasis is on patient risk. “This is not a skin assessment tool; it is a risk assessment tool,” she says.

Although some healthcare staff are using preliminary drafts of her scale, Munro says this is premature, and they should not be using the tool. Contributing factors, such as the existence of prior pressure ulcers and albumin and prealbumin levels, are still being investigated and are not included in the draft.

### Munro Scale

The Munro Scale has 3 sections—preoperative, intraoperative, and postoperative. The risk level is scored for each phase, with a cumulative score at the end.

The preoperative score is based on factors such as comorbidities, nutritional status, body mass index, and mobility.

The intraoperative score encompasses:

- OR bed surface
- type of anesthesia
- hypotension
- blood loss
- length of procedure.

OR-specific risk factors include:

- pressure (related to time)—many hospitals don’t want to replace traditional OR mattresses, which are made for utility, not prevention of pressure ulcers
- anesthesia—vasodilation
- positioning aids—heels, sacrum, occiput
- moisture on or under the patient
- friction and shear during transfers
- body issues—eg, spinal deformities.

Until the scale is completed, OR surgical services directors should heighten awareness and educate staff about the risks, incidence, and prevalence of pressure ulcers, Munro advises.

### Task force takes action

A pressure ulcer task force was formed at Stanford University Hospital and Clinics in Stanford, California, to address surgical specialties that continued to have patients with postoperative pressure ulcers—in particular, cardiac and transplant patients who were on the OR bed for long periods of time.

“Our 20-year-old OR mattresses had been replaced, but this had not eliminated the problem,” says Sharon Butler, MSN, RN, OR clinical nurse IV at Stanford.

After a literature search, the task force decided to trial an air mattress that would go on top of the existing mattress.

“The air mattress didn’t work,” says Butler. One patient developed a pressure ulcer, and the OR teams found they could not x-ray through the mattress. In addition, if a patient had to be positioned in steep reverse Trendelenburg position for an emergency situation, the valve at the top of the mattress could open and flatten the mattress.

The task force then decided to replace all OR mattresses with viscoelastic memory foam mattresses, but a couple of pressure ulcers still developed. After this, the positioning protocol was changed to use a pillow under the patient’s knees for pressure redistribution, and since then no other pressure ulcers have occurred.

However, notes Butler, the task force decided “we still needed to do something bolder.” The OR has purchased 10 alternating-pressure air mattresses that will be placed on the OR bed instead of the viscoelastic mattresses for patients deemed at risk according to a scale and comorbidities developed by task force members.

Ulcers decreased with use of new mattresses.
One reason for coming up with this tool, says Butler, is that it’s going to become a nursing protocol to order specialty beds and silicone foam ulcer-preventative dressings independent of a physician. “If a patient reaches a certain number on the tool, the mattress will be used,” she explains.

The silicone foam dressing, which is applied to the sacrum to prevent moisture, has been very successful, she adds. The dressing is put on all cardiac and transplant patients, either in preoperative holding or on the table by the circulating nurse before the procedure.

Problems have occurred with these dressings on the patient care unit because the nursing staff weren’t looking under them during every shift like they were supposed to. The dressings can remain on the patient up to 7 days. “We think a pressure ulcer was possibly caused because the dressing wasn’t checked,” notes Butler. “This is why we need a nursing protocol. If there is not an order on the chart, it can get overlooked.”

Mattresses replaced
During an assessment of perioperative skin care practices at Harris Health System in Houston, Texas, a work group focused on improving skin care practices in the OR recommended replacing existing OR mattresses with pressure-distributing mattresses composed of viscoelastic memory foam and gel. The mattresses were about 20 years old.

“I discovered that, based on the literature, the best surface for patients in the OR was a mattress composed of pressure-distributing materials,” says Megan Dooman, BSN, RN, OR skin care champion at Harris.

As part of the initiative to improve intraoperative skin care, all of the old mattresses at the facility were replaced with the memory foam-gel combination mattresses. They are layered with viscoelastic memory foam on the top and bottom with a layer of gel in the middle, strategically placed at pressure point areas.

“A comparison between hospital-wide pressure ulcer rates of all hospital inpatients the quarter before changing the mattresses and the quarter after showed a very significant decrease in hospital-acquired pressure ulcers from 0.77 to 0.32, a 58.4% decrease,” says Dooman.

Although the data include both surgical and nonsurgical patients, changing the OR mattresses was the only new intraoperative skin care intervention between quarters. Since that time, the OR also has replaced all of the foam heel and ulnar padding with gel protectors and gel-positioning devices.

The literature showed that foam padding is not the best source for pressure relief of bony prominences; off-loading and padding are better. “OR nurses have been padding patients’ heels and bony prominences with foam for years, but we actually found that the use of foam padding on top of our new viscoelastic foam-gel layered mattresses took away from its pressure-distributing properties,” notes Dooman.

Gel heel and elbow pads were purchased for additional padding when necessary. Gel pads were used for high-risk patients and for times when the mattress was positioned such that the gel layer was not in the typical pressure point area, where the feet and elbows normally rest.

“It is so essential for OR nurses to understand their role in skin protection and the effects it can have on patient outcomes,” Dooman says. “As a perioperative nurse and skin care champion at my facility, skin care is one of my passions.”

Bundled approach works
A 3-year project to standardize prevention strategies for intraoperative-related pressure ulcers at Ochsner Medical Center in New Orleans led to a drop in pressure ulcer rates from 1.51 in 2009 to 0.16 in 2011, per 1,000 procedures. Based on these rates, estimated annual cost savings could exceed $700,000, notes Susan Overman, BSN, RN, CNOR, clinical coordinator for abdominal, transplant, and peripheral vascular surgery.

In 2009, while investigating surgery incidence reports for performance improvement, Overman was asked by nursing administration to focus on pressure ulcers. The hospital was trying to improve pressure ulcer rates hospital-wide.

Representatives from all units had weekly conference calls about never events and best practices, and they started learning from one another, says Overman.

OR nurses, surgeons, anesthesi a personnel, and wound care
specialists collaborated to develop a standard of care for surgical patients at increased risk for pressure ulcers. They came up with a bundle of strategies:

- staff education on risks, prevention, assessment, and documentation of pressure ulcers
- viscoelastic polyethylene-urethane mattresses
- pressure-relieving boots
- gel pad under the sacrum if using a warming blanket
- a sacral silicone dressing for cardiovascular, liver transplant, and neurosurgery patients who are on the OR bed for more than 4 hours.

Bundled components were staged, says Overman. The mattresses were added in 2009, followed by pressure-relieving boots and other strategies 4 months later in 2010.

As Overman and the wound care specialist trialed the different products, they saw their results improve.

“We are still trialing different products as we find out about them, and we are fortunate because we have a nursing administrator dedicated to decreasing the number of pressure ulcers,” says Overman. ✤

—Judith M. Mathias, MA, RN

Reference

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Infection prevention

Environmental hygiene
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thopedic, oncology, gynecologic, urologic, thoracic, otolaryngologic, cardiovascular, neurosurgical, bariatric, and pediatric.

Our goal was to ensure that 90% of all high-touch objects (HTOs) are cleaned. And while that goal has not quite been reached, it is in sight.

Process

Our broad goals were to apply objective cleaning criteria, reach an agreed-upon percentage of cleanliness, and sustain ongoing measurements for continued improvement. Infection Prevention (IP) and Environmental Services (EVS) staff at Sacred Heart had previously implemented an invisible fluorescent target method (DAZO® Eco-lab, St Paul, Minnesota) to confidentially mark and audit whether HTOs in our patient rooms were cleaned. We sought to apply the same auditing tool in our ORs to fully understand current processes for end-of-day cleaning and identify areas for improvement.

HTOs were confidentially marked early in the morning prior to the first surgical patient, and those surfaces were evaluated using a handheld black light 24 to 48 hours later. Target removal was considered evidence of disinfection.

At baseline, our OR audits showed 66% (N=524) of HTOs were cleaned at the end of the day. The IP department set out to describe the current process and prioritize areas of focus for education. To better understand the current process, data was analyzed several different ways, including:

• Zone analysis. The HTOs audited within the OR were divided into 3 zones based on their distance away from the operating table (inner, middle, and outer zones). The inner zone HTO surfaces consisted of the main lights, Bovie, blood pressure cuffs, and pulse oximeter; the middle zone surfaces included the large side tables, small side tables, and the anesthesia machine, cart, telephone, and keyboard; and the outer zone included the light switch, OR door, hall door, cabinet door, and x-ray monitor. Areas closest to the patient had the highest percentage of total HTOs cleaned (70%), and areas along the back wall had the lowest percentage (58%).
• OR suite analysis. The OR suites were also broken down by procedure into 3 categories: orthopedic, neurosurgical, and cardiovascular surgical suites. The range for total HTOs cleaned was comparable between the suites, with 70% of total HTOs cleaned in orthopedic suites, 65% of total HTOs in neurosurgical suites, and 58% of total HTOs in cardiovascular suites.
• By each item. We displayed the data using a Pareto chart to identify which HTOs were consistently being missed during cleaning procedures and where our educational efforts should be directed to make the greatest impact. X-ray monitors, cabinet door handles, computer keyboards, and the main overhead lights were identified as areas in greatest need of improvement.

The outcomes of the baseline evaluation were shared with managers from the OR and EVS, and...
we subsequently created an action plan and educational process to achieve a focused goal of reaching and maintaining cleaning at 90% or higher. Audits (listed below) would continue to be performed periodically after sharing the outcomes of the baseline audits with staff who clean the OR.

- Posteducational audit. After outcomes were shared with staff, an audit would be done 1 week later to assess the effectiveness of the education process.
- Retention assessment audit. Within 1 to 2 months of the posteducational audit, an audit would be done to assess if the information was retained and had effectively influenced the cleaning process.
- Ongoing assessment audits. Periodic environmental audits would be done to assess ongoing process change and to identify areas for improvement.

**Maintaining results**

As the program got underway, our cleaning audits revealed a substantial increase in total HTOs cleaned during the second audit, which followed the baseline audit conducted in June 2009. A total of 77% of all items audited were cleaned in comparison with the baseline outcomes of 66%. However, a few months later, the third audit was conducted and revealed changes in process had not been sustained; the 65% of HTOs cleaned was essentially equal to the baseline results.

OR and EVS managers met to identify gaps in the cleaning process and determined lack of ownership for cleaning specific equipment was a major barrier to success. As a result, all areas and equipment in the OR were listed and designated to either OR or EVS staff. The OR staff further delineated cleaning protocols between surgical technical assistants (STAs) and anesthesia, with anesthesia taking responsibility for cleaning their own equipment.

Audits were repeated every 4 to 6 months through January 2012. After the fifth audit, there was evidence of continuous improvement; however, the results had not yet reached the goal of 90% of all HTOs cleaned.

IP was asked to identify any patterns in the data that might help identify where interventions could improve the process. The items that EVS and STAs were responsible for cleaning showed similar outcomes over time and were condensed into a single measure per audit. The percentage of items the anesthesia group agreed to clean was consistently below all the percentages of all other HTOs cleaned in the OR. The anesthesia manager addressed the outcomes with staff, emphasizing the patient safety issues associated with equipment disinfection protocols. Over the next 2 audits, done in April 2011 and January 2012, the percentage of HTOs cleaned in the OR remained above 80%. In January 2013, the percentage reached 82%.

Since 2009, OR cleaning at Sacred Heart has steadily improved, but continued audits will monitor the effects of new interventions as we get closer to achieving our goal of 90%. While our OR process objectively measures end-of-day cleaning, between-case cleaning processes are also important and are currently being investigated as well.

Hospitals looking for ways to improve cleaning practices and thoroughness of cleaning need to take a comprehensive approach that includes objective evaluation and measurement to track progress. ❖

Dianna Appelgate, MS, MPH, CIC, CPHQ, is an epidemiologist and infection preventionist; Bobbi Faust, MN, RN, CNOR, is director of Quality/Safety/Standards for Surgical Services; and Jason Dunson, CPhT, CEH, is supervisor for Environmental Services at PeaceHealth Sacred Heart Medical Center RiverBend, Springfield, Oregon.
Cancelled surgical procedures at Carilion Roanoke Memorial Hospital (CRMH) in Roanoke, Virginia, are considered a success rather than a failure. “That’s because we cancel procedures for cause,” says Sandy Fogel, MD, FACS.

Before 2010, many patients at CRMH were having surgery with undiagnosed, untreated medical problems, and postoperative 30-day mortality was too high. After a preoperative screening clinic was set up, however, postoperative 30-day mortality was cut almost in half at CRMH, a 763-bed hospital with 31 ORs.

These days, a patient who is found to have an abnormal ECG during preoperative screening, for example, may need a stress test and an angiogram, so the surgery is cancelled. “That’s a potential cardiac complication or death we have avoided,” says Dr Fogel, a general surgeon and the American College of Surgeons National Surgical Quality Improvement Program (ACS-NSQIP) champion at CRMH.

Quality report prompted change
Implementation of the preoperative screening clinic was spurred by CRMH’s first ACS-NSQIP report after becoming a member in 2007. “Our first report showed that surgical mortality was significantly higher than expected and significantly higher than the national average,” says Dr Fogel.

He put together a working group to review patient charts and find the cause of the high mortality rate. This group consisted of both physicians and nurses who reviewed charts and brought their different perspectives to the project. “The single finding that made us think we were operating on patients with undiagnosed diseases was that admitting nurses were reporting that patients were short of breath at rest and there were no diagnoses in the chart to explain why,” he says.

Looking further, the group found that 42% of hyperglycemic patients were not diagnosed as diabetic. They also found patients with angina who had no diagnosis of coronary artery disease and hypertensive patients who had no diagnosis and were not on any medications.

Preoperative screening lacking
Because southwest Virginia has a relative shortage of primary care physicians and because primary care physicians in Virginia aren’t reimbursed for preoperative screening, it became habit over the years for surgeons to do their own screening, notes Dr Fogel. “As we discovered in our chart reviews, many of the patients were not adequately screened preoperatively,” he says.

The NSQIP findings prompted Dr Fogel and other surgeons to first seek help from the primary care physicians. But it would have been overly burdensome and time-consuming to do complete preoperative screening of all surgical patients.

The surgeons then considered other preoperative screening models:
• A preoperative screening service run by hired primary care physicians. This idea was rejected because the hospital wouldn’t be reimbursed for the preoperative assessments and therefore didn’t want to pay additional salaries to physicians hired for that purpose. In addition, the patients’ primary care physicians would be cut out of the loop with another primary care physician taking care of their patients.
• All histories and physicals done by nurse practitioners. This model was deemed too expensive, and the surgeons decided it would take too long to find and hire the 10 or more nurse practitioners they needed.
• An anesthesiologist-run clinic. Anesthesiologists were also in demand for clinical duties and could not be spared.

Finally, the surgeons decided on a preoperative screening clinic run by RNs. To help them develop a screening tool, the surgeons asked primary care, internal medicine, cardiology, pulmonary, and infectious disease practitioners what specific questions they usually ask their patients to pick up on a disease.

The final list of questions was made into a computer-based checklist for the preoperative screening nurses to use, and it was incorporated into the hospital’s electronic medical record.
RNs screen all patients

The preoperative screening clinic was opened adjacent to the hospital in 2010. Every patient scheduled for surgery is required to undergo a preoperative assessment by a nurse. There are 15 nurses in the preoperative clinic who work from 7 am to 8 pm in staggered shifts to accommodate the patients’ schedules. They assess 100 surgical patients per day, including endoscopy patients.

Spending approximately 1 hour with each patient, the nurses discover an enormous number of undiagnosed problems, says Dr Fogel.

Some of the screening is done by telephone. For example, a 20-year-old man scheduled for an inguinal hernia repair would not have to be screened at the clinic unless the nurses found problems during the telephone assessment.

If a problem is identified in the clinic, the patient’s primary care physician is contacted. Because the primary care physicians are now seeing the patients for a particular problem such as uncontrolled diabetes, an abnormal ECG, or uncontrolled hypertension—not just for preoperative screening—their time is better spent, notes Dr Fogel.

If the primary care physician prefers to have a patient assessed by a specialist such as a cardiologist, the preoperative screening nurses make all of the arrangements for the patient.

Dr Fogel notes that when they were setting up the clinic, they persuaded each specialty service to keep open slots each day for these urgent preoperative visits. “We have been pretty successful in getting that accomplished,” he says. To help with this, patients now come to the clinic 1 to 2 weeks before surgery instead of 2 to 3 days ahead. “If we pick up abnormalities, there is either time to correct them or time to postpone their surgery,” he says.

Mortality cut almost in half

“After implementation of the new preoperative screening clinic, overall 30-day surgical mortality decreased from 3.5% to 1.9%, which is clinically and statistically significant,” Agathoklis Konstantinidis, MD, told OR Manager. Dr Konstantinidis, a general surgery resident at CRMH, compiled the preoperative screening data for a presentation at the ACS-NSQIP National Conference in July.

Between July 2007 and December 2009—before the preoperative screening clinic was started—the odds ratios for 30-day mortality in all cases were 1.40, 1.43, 1.58, and 1.56 in successive ACS NSQIP 6-month reporting periods (chart).

Beginning with the first report after implementation of the preoperative screening program in 2010, there was a progressively decreasing odds ratio for 30-day mortality in successive reporting periods: 1.26, 1.19, 1.14, and 0.86. In the last report in 2012, the odds ratio dropped to 0.84, says Dr Konstantinidis.

Of more than 20,000 patients who were screened in 2012, 5,866 patients had some previously unidentified risk factor:

- 3,691 had undiagnosed obstructive sleep apnea
- 2,361 had an abnormal preoperative ECG
- 437 had undiagnosed diabetes
- 192 had undiagnosed hypertension
- 67 had undiagnosed shortness of breath

Other risk factors also were found, and some patients had more than 1 undiagnosed problem.

In 2012, as a result of the screening, surgery for 218 patients was cancelled and 147 were referred to cardiology specialists for further evaluation. In the past, operations were performed without knowledge of patients’ risk factors, Dr Konstantinidis notes.

The last time Joint Commission surveyors visited the hospital, Dr Fogel says, they were shown the results of the preoperative screening process, and the Joint Commission asked CRMH to put it on their website as a best practice.

“We are very proud of that,” he says.

—Judith M. Mathias, MA, RN
Better-performing surgery departments have always paid careful attention to the patient experience. Today, payment reform and market evolution are making patient satisfaction in an OR more important than ever.

Patient satisfaction is a major component of the Medicare Value-Based Purchasing (VBP) Program. Results of the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Survey now make up 35% of your hospital’s VBP score. Patient satisfaction is also critical in the increasingly competitive surgery market. ORs that do not provide good service risk losing insured elective cases to ambulatory surgery centers and competing hospitals. This can lead to declining case volume and adverse case selection.

Hospital ORs with high patient satisfaction share a common trait—their staffs treat the patient as a valued customer. To improve patient satisfaction, begin by critically examining the entire perioperative experience from the patient’s point of view.

Make communication count

When OR teams communicate poorly, patients experience anxiety, frustration, and unwelcome surprises. OR directors should focus on 2 goals:

- Patient communication must be timely. In many hospitals, staff do not notify patients of their scheduled procedure time until 1-2 days in advance or even the night before surgery. Patients may experience weeks of uncertainty followed by a few hours of stressful last-minute preparations. Better-performing ORs inform patients of their procedure time 2 weeks in advance. To achieve this goal, you may need to rework your department’s scheduling processes. Consider the effort an investment in patient satisfaction.

- Patient communication must be streamlined. In many hospitals, surgery patients receive calls and information from multiple departments—scheduling, preadmission testing (PAT), and financial services—plus the surgeon’s office. The patient is responsible for piecing together all the information. Even worse, instructions are sometimes contradictory.

In contrast, well-designed surgical services organizations make sure patients receive information from a single contact. This goal can be difficult to achieve. One solution is to incorporate insurance verification personnel into PAT. One call to the patient will cover both preadmission instructions and financial counseling. If staff cannot be consolidated, at least try to coordinate messages across departments. The goal is to ensure patients hear the same message from everyone.

The best ORs also use communication to set patient expectations. This is an important element of patient satisfaction—patients with realistic expectations are less likely to be disappointed with their care.

Be sure to cover the basics. Patients should understand where they need to go on the day of surgery, what they need to bring, how long different steps will take, etc. Call scripts will help ensure staff cover all the details. In addition, consider developing a “patient handbook” with complete information on presurgical testing, the day of surgery, the inpatient stay, discharge expectations, and billing. Handy resources for patients are available from the American College of Surgeons (www.facs.org/public_info/patientguidebook.html; www.facs.org/patient-education/surgery.html).

A neglected aspect of communication is setting expectations about pain. As a rule, you cannot count on the surgeon to communicate clearly about this topic. OR directors should make sure the PAT process includes a realistic look at postoperative pain and a discussion of pain control options.

Target wait times

Excessive wait times are a leading cause of patient dissatisfaction. Good will erodes as patients and family members grow bored, hungry, and frustrated. Long wait times affect every step of the perioperative process—from PAT and registration through admission, preoperative holding, and the postanesthesia care unit (PACU).

Several process improvements will help reduce patient wait times. For example, strengthening the block time system will im-
Avoid bottlenecks

Wait times are common in many hospital PAT clinics. One way to relieve PAT congestion is to create a pre-PAT screening process.

All patients need to go through a preoperative evaluation, but not everyone needs to have an on-site visit at the clinic. At an East Coast specialty hospital, staff developed a PAT screening questionnaire for use by surgeon office staff. The questionnaire includes about a dozen yes/no questions that identify higher-risk patients and patients with conditions that need additional management. If any answer is “yes,” the patient is scheduled for an in-person visit at the PAT clinic. All others are triaged for phone evaluation only.

This process allows PAT staff to clear more patients without an on-site visit, which is more convenient for these individuals and their families. The process also reduced clinic volumes by 20%, creating a better, faster experience for patients.

Another effective strategy is simply to rework schedules to improve patient flow on the day of surgery. At that same East Coast specialty hospital, all patients scheduled for a 7:30 am procedure were instructed to arrive at 6 am. The resulting bottleneck led to long patient wait times at the start of every day. In addition, OR staff did not arrive until 7 am. In many cases, this did not give staff enough time to prepare for the scheduled 7:30 am start, creating further delays.

Two simple changes reduced patient wait times significantly (chart). First, patient arrival times were staggered at 15-minute intervals, allowing staff to process patients in waves. An earlier start time for OR staff and designated physician arrival times ensure first cases can begin on schedule.

Source: Surgical Directions

prove daily efficiency and reduce surgical delays (see OR Manager, May 2013, pp 21-24). Strengthening preoperative preparation will reduce late starts and last-minute cancellations. In many leading ORs, the anesthesia department has developed evidence-based protocols for the preoperative management of patient comorbidities and risk factors.

Simple process changes can have a big impact. For example, in many ORs staff do not review patient charts for lab results and medical clearance until 48 hours before surgery. At that point, any abnormal results that call for additional workup will create inconvenience for the patient and could necessitate rescheduling the procedure.

The solution is simply to have staff check charts earlier in the process, such as the day after the patient’s PAT appointment. Any problems will be identified a week or more before surgery, and a last-minute scramble will be avoided. This approach helped 1 hospital OR reduce its same-day cancellation rate from 6% to less than 1%.

OR leaders can also attack wait times directly through Lean Six Sigma. Create a “current state” map of perioperative processes. Go over the map with your team, and brainstorm about ways to cut wasted steps and streamline patient flow. Next, develop a “future state” map of revised processes. Work with managers and nursing staff to implement new processes and patient pathways.

The results can be dramatic. In 1 hospital PAT clinic, patient wait times were cut in half simply by converting several sequential steps to parallel processes. Monitoring and follow-up are important. Create time stamps within your electronic medical record, and use system reports to monitor patient flow through each area of your department.

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admissions in waves. Second, the staff arrival time was moved to 6:45 am, and expected arrival times were designated for anesthesiologists (6:50 am) and surgeons (7 am). Thanks to these changes, the hospital’s on-time start rate has increased from 70% to 95%.

Create a service environment
In addition to fine-tuning processes, OR directors should strive to build a strong service environment within surgical services.

Staff skills are the cornerstone. For instance, the HCAHPS survey asks patients whether they were treated with courtesy and respect. Role-playing can help staff develop strong skills in this area. During an in-service session, join with staff to act out various patient scenarios. Allow participants and spectators to give feedback and suggest better ways to handle patient interactions. Exercises like this make everyone more aware of the situations that make or break a patient’s service experience.

Waiting, examination, and preoperative areas with too much of a “clinical” feel can increase patient anxiety. Some hospitals spend a lot of money on facility upgrades, but lower-end solutions such as new furniture, murals, or greenery can also help. To enhance patient and family privacy, add dividers or reposition workstations.

Improving patient service through front-end planning is critical, but ORs should also have a back-end strategy for following up on service failures. Whenever a patient has a negative experience or voices a complaint, activate a “service recovery” process. An uninvolved staff member (such as a hospital social worker) should contact the patient, listen to the concerns, and mediate an acceptable resolution.

In addition, the manager of the area in which the negative experience occurred should personally follow up with the patient. For example, if a patient has an excessive delay in the PACU while waiting for an inpatient bed, the PACU nursing manager should later visit the patient on the floor to apologize.

Most ORs use a third-party survey company to track patient satisfaction. These tools can also be used in service recovery. Whenever a survey response includes a name and phone number or address, consider this to be a signal that the patient wants to be contacted. Designate an OR representative to contact these patients and discuss all feedback, both good and bad.

Next month
Many OR leaders find that service improvement has collateral benefits. Factors that increase patient frustration, such as redundant communication, also increase costs. Streamlining these processes to improve patient service will also reduce department expenses.

Next month, we will look at how to improve relations with hospital executives. Learn how to work effectively with the executive team and help your CEO meet the challenges of 2014.

This column is written by the perioperative services experts at Surgical Directions (www.surgicaldirections.com) to offer advice on how to grow revenue, control costs, and increase department profitability.
Using chemical sterilants and high-level disinfectants in health care facilities

The update of the Association for the Advancement of Medical Instrumentation American National Standard Chemical sterilization and high-level disinfection in health care facilities, ANSI/AAMI ST58:2013, is available for purchase and should become part of health care facilities’ evidence-based library. Below is a brief description of the contents of the recommended practice, and ordering information is provided at the end of this article.

Sections 1 and 2
Chemical sterilization and high-level disinfection in health care facilities (Section 1) and Definitions and abbreviations (Section 2).

This document provides information on the safe use of liquid chemical sterilants (LCS), high-level disinfectants (HLD), and gaseous chemical sterilants (GCS) cleared for marketing by the Food and Drug Administration (FDA). Not included is ethylene oxide, which has its own AAMI recommended practice (Ethylene oxide sterilization in health care facilities, ANSI/AAMI ST418:2008).

In this document, “chemical sterilants/high-level disinfectants” includes both liquid and gaseous chemical sterilants unless otherwise noted.

Section 3
Work area design considerations.

This section discusses the information needed for workplace design, traffic control, ventilation, and containment to minimize potential employee exposure. Proper environmental monitoring to ensure the levels of chemicals in the air do not exceed recommended limits is also discussed. Annexes A-I and N provide more information on the monitoring requirements for all LCS/HLD and GCS.

Section 4
Personnel considerations.

This section discusses staff qualifications for supervisors and processing personnel. Competencies needed for working with LCS/HLD and GCS, which should be part of a department’s education program, are also covered.

Personnel protective equipment (PPE) is discussed for eye, skin, and respiratory protection. More specific PPE is discussed in Annexes A-I and in the chemicals safety data sheet (SDS) and instructions for use (IFU).

New information is included about eyewash/facewashes and showers:
- Water temperature should be between 15°C and 43°C (60°F and 100°F) and routinely tested and documented.
- Plumbed eyewashes/facewashes and showers “should be activated weekly for a period long enough to verify operation and ensure that the flushing solution is available.” This section also states that routine testing should be documented.

Section 5
Selection of liquid and gaseous chemical sterilants/high-level disinfectants.

This section provides questions for the user to answer “when choosing disinfecting and sterilizing agents and equipment.” Also provided is a list of questions users “should ask” the manufacturers of LCS/HLD products and automated processing equipment, the manufacturers of GCS sterilization systems, and the manufacturers of medical devices to be processed.

Section 6
Decontamination and preparation of instruments.

This section discusses the “sterility assurance measures [that] should be used from the time items are received into the health care facility until they are used.” The areas of discussion include:
- Receiving of purchased items at loading dock (Section 6.2).
- Handling, collection, and transport of contaminated items (Section 6.3).
- Transport of clean/sterile items and contaminated items, trash, and food from each area to decontamination within a facility, between buildings, or to an off-site location (Section 6.4).
- Aseptic presentation of sterile packages and removal of devices from HLD equipment and delivery to point of use (Section 6.5).
- Cleaning and other decontamination processes (Section 6.6).
- Packaging (Section 6.7).

The cleaning and other decontamination processes (Section 6.6) are further broken down into these sections:
- Preparation for cleaning (Section 6.6.2).
- Disassembly (Section 6.6.3).
- Cleaning (Section 6.6.4).
- Rinsing (Section 6.6.5).
- Drying, inspection, and verification of the cleaning process (Section 6.6.6).
- Microbial processes (Section 6.6.7).

This update addresses:
- Receiving and documentation of delivery of loaned items.
- The “usage of rigid sterilization container systems with closed valves or intact, dry filters” to transport contaminated items.
- Information on brushes that Continued on page 18
Sterilization & infection control

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should be supplied by the medical device manufacturer to ensure effective cleaning of lumen.

• Monitoring of mechanical equipment “when evaluating or changing to a new type of cleaning chemistry, upon installation, weekly (preferably daily) during routine use, and after major repairs. A major repair is a repair that is outside the scope of routine preventive maintenance and that significantly affects the performance of the equipment.”

• The use of water-soluble lubricants—not lubricants containing mineral oil or other oil bases unless specified by the medical device manufacturer’s IFU.

Section 7

Using chemical sterilant/high-level disinfectants safely and effectively. This section covers general safety and efficacy considerations when using LCS/HLD or GCS and includes:

• Establishing policies and procedures (Section 7.2).

• Following device manufacturer’s written IFU (Section 7.2.2).

• Following LCS/HLD manufacturer’s written IFU (Section 7.2.2.1).

• Following mechanical LCS/HLD equipment manufacturer’s written IFU (Section 7.2.2.2).

• Following gaseous chemical sterilization equipment manufacturer’s written IFU (Section 7.2.2.3).

• A new section on ensuring cleaning effectiveness (Section 7.2.3) notes that “The use of methods that are able to measure cleaning effectiveness that is not detectable by visual inspection may be considered in facility cleaning policy and procedures.”

• A new section on excess moisture (Section 7.2.3.1) notes that it is necessary to remove excess moisture from items being processed with LCS/HLD and GCS.

• General safety considerations as stated in the products’ SDS and the OSHA Hazard Communication Standard (29 CFR 1910.1200) (Section 7.3).

• The need for a LCS/HLD spill containment “response team” (Section 7.3.2.1) and a written plan for containment of LCS/HLD spills (Section 7.3.2.2).

• Liquid chemical sterilants/high-level disinfectants (Section 7.4) was divided into more sections to discuss the relationship between LCSs and HLDs, single vs multi-use, process parameters, water quality for dilution and rinsing, containers for solution storage, and monitoring, which is also discussed in Section 9.

Section 8

Device storage and transport. This section covers postprocess handling and storage of items processed by LCSs/HLDs and GCS.

Section 9

Quality control. This is the only recommended practice that addresses quality control in the use of LCS/HLD and GCS. This section covers:

• Lot control numbers (Section 9.2.1).

• Cycle documentation (Section 9.2.2). Documentation now includes the shelf-life date, lot number, and date the original container of LCS/HLD was opened.

• Expiration dating (Section 9.2.3).

• Monitoring manual processes that use LCSs/HLDs (Section 9.3). Physical monitoring, which includes a thermometer and timer as well as visual inspection of the solution, should be used for each process. Solution test strips or chemical monitoring devices should be used before each use to determine if the minimum recommended concentration (MRC)/minimum effective concentration (MEC) is correct. This section also covers what to do if the monitors indicate a problem.

• Monitoring automated processes that use LCSs/HLDs (Section 9.4). Physical monitoring involves checking the automated processing equipment printout before and after each cycle. Solution test strips or chemical monitoring devices should be used before each cycle to determine if the MRC/MEC is correct. For LCSs/HLDs, use a chemical indicator according to the manufacturer’s IFU (eg, each cycle is appropriate). Follow the manufacturer’s IFU for the spore test strips that have been FDA-cleared for 1 LCS process. This section also covers what to do if the monitors indicate a problem.

• Monitoring gaseous chemical sterilization processes (Section 9.5). Physical monitoring involves checking the automated processing equipment printout before and after each cycle. A chemical indicator should be used on the outside and inside of each package. A biological indicator process challenge device should be used at least daily, but preferably in every sterilization cycle, for sterilizer qualification testing and product testing. This section also covers what to do if the monitors indicate a problem.

• Product release (Section 9.6). Active decision based on evaluation of all data.

• Product testing (Section 9.7). This new section discusses how to perform product testing for both LCS/HLD and GCS processes by testing a master product identified from a family of products.

• Product recalls (Section 9.8). This section discusses recall
procedures, recall order, recall summary report, and outbreak reports.

Section 10
Quality process improvement.
This section lists specific performance measures to use when performing a risk analysis as part of the health care facility’s quality process improvement.

Annexes
Annexes A to I provide valuable information on properties and applications, effective and safe use, procedures for cleaning up spills, and disposal for FDA-cleared LCS/HLD and GCS.

Other annexes include:
- Annex A: Microbial lethality, materials compatibility, and toxicity.
- Annex M: Example of documentation of premature release of implants.
- Annex N: Gas and vapor monitoring.

This recommended practice can be used to update policies and procedures to protect employees from potentially hazardous materials and to ensure safe and effective processing of medical devices for patient care when using liquid chemical sterilants, high-level disinfectants, and gaseous chemical sterilants.

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Martha Young is an independent consultant with long experience in medical device sterilization and disinfection.

Reference

Ordering information
ANSI/AAMI ST58:2013 Chemical sterilization and high-level disinfection in health care facilities can be purchased through AAMI by credit card using the following options:
1. Internet: http://www.aami.org and click on publications
2. Call: 1-877-249-8226
3. Fax: 1-240-396-5781
4. Mail: AAMI publications, PO Box 211, Annapolis Junction, MD 20701-0211

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Trauma events occur every 5 minutes in the United States, and 30% of trauma patients die within 120 minutes of the event because of major organ injuries that lead to heavy blood loss.

Better outcomes are achieved when care is initiated within 60 minutes, a time frame commonly referred to as the “golden hour.”

Because of the rapidly evolving healthcare environment, trauma centers are continually challenged to improve the care delivery process for critically injured patients. In 2009, Houston’s Memorial Hermann-Texas Medical Center campus identified an opportunity to improve care and developed a more systematic delivery approach for managing trauma patients.

“The main objective was to create a dedicated trauma OR team and eliminate the need for the circulator to leave the OR,” explains Darlene Murdock, BSN, BA, RN, CNOR, Clinical Nurse IV.

After instituting the dedicated OR and trauma team—among many other protocols led by the affiliated physician team and the dedicated nursing staff—Memorial Hermann-Texas Medical Center, one of the nation’s busiest Level I trauma centers, improved its mortality rate for trauma patients by 62%.

“We feel confident that the dedicated OR and trauma teams played a large role in providing more efficient quality care,” adds Murdock.

**Trauma room designated**

“Prior to our initiative, we did not have a dedicated trauma OR and staff,” says Murdock.

There are 39 ORs, she notes. Because trauma happens without notice, the circulating nurse was at times leaving the room to obtain the necessary equipment for the trauma case. To ensure the highest level of care was provided, the leadership team instituted a change.

In 2009, the OR director and trauma chief designated the largest of the 39 ORs for trauma, and
after a thorough overview of the process and best practice, the following changes were made:

• The room was reorganized and stocked with trauma surgery equipment and supplies.

• A check-off sheet and protocols were put in place to ensure all equipment and supplies were present.

• Supply cabinets were labeled for ease of retrieving supplies.

• Computerized rolling trauma supply carts were streamlined to ensure efficiency and complete charge capture.

• Instrument sets were streamlined, and additional instruments were ordered.

• Supplies were added to the trauma pack to eliminate time spent on opening individual packages.

Check-off sheet implemented
In 2010 the check-off sheet was updated and made more user-friendly, and a second check-off sheet was created—now there is 1 for the circulator and 1 for the surgical technician, each with different supplies and equipment to check.

“We made check-off sheets for both circulators and surgical technicians to ensure nothing was missed,” explains Murdock. “This redundant system has served as a tremendous help,” she says.

The circulators are accountable for the room setup and must confirm room readiness by turning in completed check-off sheets to the charge nurse at 7 am and 7 pm.

“Because of the check-off sheets, supplies and equipment are always in the same place now, so when a surgeon asks for something, you know right where to get it,” says Naomi Brown, BSN, RN, OR surgical nurse III.

Trauma team initiated
Designating a team of RNs and surgical technicians just for the trauma room has been key to increasing patient safety, efficiency, and surgeon satisfaction, says Laura Keller, BSN, RN, OR clinical manager for the night shift.

“If you are always in the same room, you know where things are, you know where things belong, and you know how the room is set up,” notes Keller. Familiarity with the team members also adds to the trauma surgeons’ comfort level. “When things get tense in

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the room and the patient is crashing, they don’t have to worry. They know we know what we need to do,” says Keller.

Keller has 4 RNs and 5 surgical technicians who rotate through the 12-hour night shift. There are 10 trauma surgeons. To create the team, Keller says she asked the people she knew could handle the stress of being in the trauma room.

“No one told me no,” says Keller, “but they didn’t want to do it every night. That is why we rotate them.”

**Surveys show satisfaction**

Surveys were developed to see how the circulators and trauma surgeons perceived the efficiency and preparedness of the trauma room and team. The surveys were developed by Murdock in August 2012 to measure the success of the initiative. On a monthly basis Murdock and Brown evaluated the results and shared the results with everyone on the trauma team. This process continues today; the feedback on how the team operates ultimately impacts patient care, which is the department’s highest priority.

After each case the surgeons complete a survey to tell the team how the case went and how well they thought the team worked, says Murdock. “The surgeons want to fill out this survey; they ask for it at the end of each case,” she says.

The circulators also fill out the survey, commenting on the room setup and noting whether they had to leave the room for anything. Survey results indicate a significant decrease in the number of times the circulator has to leave the room for equipment and supplies.

“Our survey has really helped us to determine where we are and where we need to go,” says Murdock.

Judging by a 4-month average of results from 108 completed surveys, a majority of circulators and trauma surgeons are satisfied with the trauma room setup. The average score was 4.6 on a scale of 1 to 5.

To ensure the hospital continues to move toward providing the highest level of quality care, Murdock says the team is in the process of implementing AORN’s recommended practice for the trauma room temperature to remain at 85°F until the patient becomes normothermic, to help improve outcomes.

—Judith M. Mathias, MA, RN
Group purchasing has long been a tradition for hospitals. Now ambulatory surgery centers (ASCs) are beginning to adopt the practice, and the reason is simple: Group purchasing organizations (GPOs) are noticing their needs and recruiting them as members.

“We are evolving services,” explains Randy Piper, vice president of nonacute contracting for Amerinet, a national GPO. Currently about 2,900 ASCs are Amerinet members. Premier, another national GPO, used to avoid recruiting ASCs, partly because its hospital members considered them competition, but today it has an advisory board representing ASC members.

Numbers game
For many years, the major GPOs ignored ASCs and other nonacute care facilities. Group purchasing was a numbers game. The more purchasing volume a GPO could guarantee, the better the deals it could negotiate with manufacturers and distributors.

ASCs, small and independent, were left to manage on their own, paying higher prices for medical-surgical devices. Very few could afford to dedicate staff to investigate suppliers and products. Their physician owners were concerned about revenue and expenses, but they also had strong loyalties to particular products and sales representatives.

During the 1990s, hospitals began to merge with other hospitals and nonacute facilities to form integrated delivery networks (IDNs). Some were large enough to negotiate supply contracts on their own, obtaining GPO-sized discounts for all of their affiliates. GPOs began to concentrate on the members that benefited most from GPO membership: small acute-care hospitals. Like today’s ASCs, the smaller hospitals had limited clout with suppliers because of their relatively low purchasing volume. Even as group members, they often found themselves on the highest contract pricing tiers—“the higher the volume, the lower the price” was the rule. One implication of the Patient Protection and Affordable Care Act (ACA) is there will be increasing focus on nonsalary expense savings.

Although the law makes few actual references to medical-surgical supplies (except for a controversial tax on devices), it does call on the healthcare system to reduce costs to patients and insurers such as Medicare. Reduced reimbursement, shared savings programs such as accountable care organizations (ACOs), and value-based purchasing (also known as “pay for performance”) are likely to narrow the gap between revenue and expense. It will be essential for ASCs to continually improve efficiency and trim costs.

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Sharing the wealth
GPOs earn much of their revenue from administrative fees they charge to contracted vendors in return for publicizing and marketing those contracts. Healthcare providers pay nothing to belong, though they are often charged for additional services such as consulting and analytical software. As members, they also are entitled to share in distributions or rebates when the administrative fees exceed the GPOs’ expenses.

The Department of Health and Human Services (HHS) reported in 2005 that 3 unidentified national GPOs together received $1.8 billion from vendors over a 5-year period and distributed $898 million of that to their members during the same period. To reward purchasing loyalty, vendors often give rebates directly to GPO members based on spending volume. HHS found in the same audit that 21 hospitals received a total of $285 million in vendor rebates.

All those rebates are perfectly legal, thanks to a safe-harbor provision in the federal anti-kickback law. However, Congress apparently did not foresee the eventual outcome of its decision. As GPOs became more dependent on vendors for their income, vendors became more powerful, making demands such as exclusive national contracts that shut out smaller companies. They insisted on confidentiality clauses in contracts so that no hospital would know whether it was getting the best price or even average prices. Patients and physicians were kept equally in the dark.

By 2005, the Health Industry Group Purchasing Association (HIGPA) had about 140 members, of which 115 were manufacturers, distributors, and other suppliers. Only 25 represented GPOs and large IDNs.

Meanwhile, the industry had become a center of controversy as small suppliers made headlines with accusations of discrimination by GPOs. HIGPA later banished suppliers as regular members and began lobbying efforts in response to Congressional investigations. HIGPA is now called the Healthcare Supply Chain Association (HSCA). It has 14 members, all GPOs, and a strong lobbying arm. Visit www.supplychainassociation.org.

An unusual luxury
With the growth of the nonacute market, including ASCs, GPOs are turning their attention to attracting nonhospital members and, in deference to legal challenges, smaller suppliers. They largely abandoned sole-source contracts, a move that gives members a wider choice of products and the option of keeping some physician preference items. Standardization—brand loyalty for commodity products such as suture and gloves—remains the best way to obtain substantial discounts.

As LeeAnn Puckett of Evansville (Indiana) Surgery Center explains, “You don’t have to pay $6 for a box of needles when you could get it for $3. It’s ridiculous.” Puckett holds an unusual position for an ASC: full-time materials manager. She is the point of contact for the 2 facilities with suppliers and GPOs, despite Evansville’s affiliation with Deaconess Hospital, which also belongs to a GPO. She had worked with several GPOs, including Novation and MedAssets, before selecting Premier in 2010. The reason, she says, is that Premier had organized a regional group of ASCs and allowed them to aggregate their purchasing volume so as to qualify for better pricing under Premier contracts. Before joining the group, called Alliant, she says, her ASC was very small. “As an ASC, even if we were 100% committed to a contract, we wouldn’t qualify for the best tier because of our low volume.” Suddenly, Evansville’s $60,000 annual suture spend was merged with Alliant’s $1 million, producing a large discount.

Help with contracts
Even as a full-time materials manager, Puckett says she appreciates the fact that Alliant provides help with contract management, which is critical to obtaining the full advantages of GPO participation. When a contract expires, for example, often distributors will continue to deliver products, but at precontract prices. To take advantage of new contracts, facilities must complete forms called letters of commitment.

“You need a GPO or full-time materials manager to track contract dates,” she says. “Most ASCs just don’t have the tools to do it.”

Alliant and similar regional groups have staff on hand to alert members to available contracts and arrange for letters of commitment.

Converting to Premier contracts was not easy, Puckett notes, because staff had to get used to new products and a new prime distributor, Medline Industries in Mundelein, Illinois. It was worth the effort, however; in the first
Ambulatory surgery centers (ASCs) are asking the Centers for Medicare & Medicaid Services (CMS) to reconsider the next round of quality measures contained in the Calendar Year 2014 Ambulatory Surgical Center Payment Proposed Rule and to revisit the payment update formula.

Quality Collaboration: Revise measures

In a memorandum to CMS administrator Marilyn Tavenner, Donna Slosburg, BSN, LHRM, CASC, executive director of the ASC Quality Collaboration (ASCQC), noted that 4 new quality measures in the proposed rule, to be reflected in 2016 payments, may be impractical to implement:

• complications within 30 days following cataract surgery requiring additional surgery
• improvement in vision within 90 days of cataract surgery
• appropriate follow-up interval for normal colonoscopy
• interval between colonoscopies for patients with previous adenomatous polyps.

“Unlike other outpatient surgical settings, such as clinician offices, ambulatory clinics, or hospital outpatient departments, ASCs may not provide postoperative follow-up care after patient discharge,” Slosburg wrote in a memo. Because the measures require tracking of patient treatment following surgery, she added, “From a practical standpoint, it is unclear how ASCs are to consistently obtain the information required.”

She also warned that, should CMS decide to include the measures in its final rule, the proposed timeline for implementation is not realistic. According to the CMS schedule, it will issue a final rule by early November, and ASCs must begin to collect quality data on January 1, 2014 for the CY 2016 payment determination.

During that 2-month period, ASCs would have to develop and implement procedures for collecting and reporting the additional data, including staff training and software modification.

“The proposed timeline is entirely inadequate,” Slosburg concluded.

Slosburg’s memo also proposed that CMS develop additional quality measures for ASCs. These may include surgical site infection, normothermia, venous thromboembolism, hospital admission following discharge, and patient satisfaction.

Premier: Validate antibiotic use

Also weighing in during the comment period was the group purchasing organization Premier. Blair Childs, Premier’s senior vice president for public affairs, wrote a memo to Tavenner stating that CMS should establish a method of validating the quality reports on prophylactic IV antibiotic timing. Unlike most quality measures, which cover “rare events,” administration of antibiotics prior to surgery is common, Childs explained, and is also 1 of the measures that hospitals must report. He suggested using a random selection of ASCs and medical records to verify the reports.

“Because this measure involves a very important aspect of surgical care quality and because the public will rightfully compare performance on this measure to hospital outpatient department (HOPD) performance, we urge CMS to take steps to ensure these comparisons are meaningful,” he said.

ASCA: Align payments

The Ambulatory Surgery Center Association (ASCA) also is calling for changes in the new quality measures and wants to add a measure for patient satisfaction. But ASCA saved its strongest response for the payment update, which is only 0.9% compared to 1.8% for HOPDs. In a statement provided to OR Manager, Kara Newbury, assistant director, government affairs for health policy, urged CMS to use the same formula for payments to ASCs and HOPDs. The statement warns, “Historical progress in moving services into less-intensive settings has slowed or reversed. Investors in new capacity are looking toward the hospital sector, where Medicare pays 78% higher rates, revenue is tax exempt for most hospitals, and new construction can be financed by tax-exempt bonds. Even new market investments in ASC management companies are often focused on organizations that have a strong portfolio of hospital business in addition to ASCs. The proposed rates and other policies in the rule exacerbate these problems and threaten the viability of the ASC community.”

—Paula DeJohn
Continued from page 24 year, Evansville’s 2 centers converted to Alliant contracts for suture, surgical packs, medical supplies, and pharmacy products, and saved a total of $91,000.

“When we did that, I was a rock star here,” Puckett recalls.

While Evansville concentrates on expense reduction, GPOs have been expanding their offerings to include services other than purchasing for both hospitals and ASCs.

“We’re basically helping take care of the details, so you can focus on patient care,” Amerinet’s Piper explains. Amerinet offers benchmarking services to track inventory turnover and par levels, consultants who work with physicians to standardize to the extent possible on expensive preference items such as implants, and regional groups of its own. Nonmedical contracts cover telecommunications, energy, office supplies, computer hardware and software, facility management, and financial management.

It offers staffing services, employee training, and employee benefits, he says, and even makes some of its contract discounts available to employees.

—Paula DeJohn

References

Finding a GPO
The following group purchasing organizations have national contracts, and several have dedicated ambulatory surgery departments or regional alliances that help small facilities aggregate their purchasing volume.

Amerinet, St Louis
www.amerinet-gpo.com
Children’s Hospital Association, Overland Park, Kansas
www.childrenshospitals.net
HealthTrust Purchasing Group, Brentwood, Tennessee
www.healthtrustpg.com
MedAssets, Alpharetta, Georgia
www.medassets.com
Novation, Irving, Texas
www.novationco.com
Premier, Charlotte, North Carolina
www.premierinc.com
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- Combined ST, CS role, Mar: 21

### SPINAL SURGERY
- Spinal implant costs, Jan: 14

### STAFFING
- 2013 Survey, Sep: 1
- College structure model success, Jul: 1
- Combined ST, CS role, Mar: 21
- Cutting labor costs, Sep: 25
- Modifying on-call options, Apr: 1
- Monitoring staff productivity, Mar: 1
- New on-call plans, Apr: 14

### STANDARDS
- Alarm management resources, Sep: 16
- Alarm safety standards, Sep: 1
- Chemical sterilant usage, Dec: 17
- Stryker’s Neptune recall, May: 16

### STERILIZATION & DISINFECTION
- Automating sterile processing, Apr: 10
- Avoid abuse of IUSS, Mar: 22
- Cleaning by OR zones, Mar: 10
- ‘Cockpit checklist’ reduces defects, Apr: 8
- Environmental hygiene in the OR, Dec: 1
- Monitoring OR cleaning, Mar: 1
- Safer surgery, part 4: sterile processing, Apr: 1
- Scope storage, Jan: 19
- Sterile processing Q&A, Sep: 21
- Unprocessed tray incident, Jul: 16
- Using technology for cleaning, Mar: 12

### SUPPLIES & EQUIPMENT
- Chemical sterilant usage, Dec: 17
- Controlling supply costs, Jul: 21
- Group purchasing in the ASC, Dec: 23

### SURGEONS
- Surgeon-vendor collaboration, Aug: 21

### SURGICAL INSTRUMENTS
- ‘Cockpit checklist’ reduces defects, Apr: 8
- Preventing retained items, May: 18
- Sterile processing Q&A, Sep: 21
- Unprocessed tray incident, Jul: 16

### SURGICAL SITE
- Data sharing to prevent SSI, Jan: 11
- Preventing colorectal SSI, Jan: 1
- Success preventing wrong site, Jan: 23
- Wound classification tree, Jun: 22

### TEAMS & TEAMBUILDING
- Boston bombing aftermath, Jun: 1
- Safer surgery, part 5: checklists, May: 1
- ‘Second-victim’ trauma, May: 10
- Surgical fires response, Nov: 9
- Team & checklist; better outcomes, Apr: 16

### TECHNOLOGY
- Improving patient throughput, Aug: 1
- Technology hazards for 2013, Feb: 16
- Using technology for cleaning, Mar: 12

### TIMEOUT
- MN timeout example, May: 13

### TRAUMA
- ‘Second-victim’ trauma, May: 10
- Trauma center protocols, Dec: 20

### TREATMENT ERRORS
- Device fragments new focus, Jul: 1
- Editorial, Jul: 3
- MN event reporting system, Jun: 29
- Robotic surgery complications, Oct: 5
- Surgical ‘never events’, Feb: 5

### TURNOVER TIME – see PRODUCTIVITY

### VALUE-BASED PURCHASING
- Value analysis checkup, Jan: 21

### VENDORS
- Managing vendor access, Nov: 14
- OR/vendor partners yield savings, Nov: 11
- Surgeon-vendor collaboration, Aug: 21
- Vendor credentialing best practices, Nov: 1

### WORK REDESIGN
- 2013 Survey: success, Oct: 12
- Failure leads to change, Aug: 26
- New on-call plans, Apr: 14
- Strategic OR culture changes, Jun: 17
- Streamlining scheduling, Feb: 9
- Unprocessed tray incident, Jul: 16

### WRONG SITE – see SURGICAL SITE
Quality improvement efforts cut readmissions

Hospitals participating in the Hospital to Home Quality Improvement Initiative had statistically significant changes in strategies to reduce readmissions, a study finds.

In a survey of 437 participants, more hospitals reported:
• partnering with other local hospitals to reduce readmissions
• discharging patients with a follow-up appointment already made
• using electronic forms for medication reconciliation
• providing action plans to discharged heart failure patients or their caregivers
• calling patients after discharge to follow up on postdischarge needs and education.


Strong hospital-SNF relationships beneficial

Patients discharged to skilled nursing facilities with which a hospital has a strong relationship are less likely to be rehospitalized within 30 days, finds a study.

For patients discharged to a SNF owned by the hospital, the rehospitalization rate was 17%, compared to 21% for patients discharged to a SNF not linked to the hospital.


Night shifts not linked to nurses’ cognitive decline

An analysis of 16,000 women in the Nurses’ Health Study found that night-shift workers through midlife (ages 58 to 68) had cognitive test scores similar to those of nurses who never worked night shifts. In previous studies, shift work has been associated with cognitive decline and chronic health problems, including cardiovascular disease.

The Harvard-based Nurses’ Health Study has tracked some 238,000 RNs since 1976.

—http://aje.oxfordjournals.org/content/178/8/1296.abstract

Surgeon skill correlated to complication rates

Greater surgical skill was associated with fewer postoperative complications and lower rates of reoperation, readmission, and visits to the emergency department in a study of 20 bariatric surgeons.

Compared with the top quartile, the bottom quartile of surgical skill was associated with higher complication (14.5% vs 5.2%) and mortality (0.26% vs 0.05%) rates. The lowest quartile also was associated with longer procedures (137 vs 98 minutes), more reoperations (3.4% vs 1.6%), and higher rates of readmission (6.3% vs 2.7%).


History of falls tied to postop complications in older patients

A history of 1 or more falls in the 6 months before surgery was associated with postoperative complications, discharge to a care facility, and 30-day readmissions in a study.

The study included 235 patients with a mean age of 74 years undergoing elective colorectal and cardiac procedures. A total of 33% had preoperative falls.

Using a history of falls in preoperative risk assessments of older patients is a shift from current preoperative assessment strategies, the authors say.