

Ambulatory Surgery

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Patient safety

'Preflight checklist' builds safety culture, reduces nurse turnover

A time-out before surgery is now routine as part of surgical site verification. Before the incision is made, the team stops to make sure they have the right patient, right procedure, and the right surgical site.

What if the briefing was extended to cover other important aspects of the case? Would that make a difference in patient safety and collaboration?

Kaiser Permanente's (KP) Southern California Region has shown it can. Since the briefings began, no incidents of wrong-site surgery have happened, staff morale has risen, and nurse turnover has declined. They've just won KP's first national David M. Lawrence Patient Safety Award for their efforts.

Patient safety briefings have been a

reality in the ORs at Kaiser's Anaheim Medical Center in Anaheim, Calif, for more than a year. The hospital, with five ORs and one cysto room, performs about 7,000 cases annually.

Before each surgical case, the OR team takes a minute or two right after anesthesia induction to run through a set of criteria much like a "preflight checklist." The circulating nurse usually starts the briefing, but any team member can initiate it.

"We already have a time-out to identify the patient, procedure, and site. We said, 'Let's expand that,'" says Jim DeFontes, MD, physician director of KP's Orange County, Calif, surgical service line, who fostered the project. He

Continued on page 8

Risk management

Risks to consider when planning a program for bariatric surgery

Do you have a bariatric surgery program or are you considering developing one?

Bariatric surgery programs are growing rapidly as many insurers now provide reimbursement for approved procedures.

What should an organization consider when developing a bariatric surgery program?

We asked Linda James, RN, MSN, CNAA, HRM, assistant vice-president of risk management for PHT Services, Ltd, a risk management services company serving the health care industry in South Carolina, about strategies for managing risks. James was the moderator of an American Society of Healthcare Risk Management audio conference on

patient safety in perioperative services.

Among the issues she discussed were informed consent, privileging, postoperative complications, foreign-body retention, equipment needs, education, and long-term follow-up care.

Q. Does bariatric surgery carry higher medical-legal risks than other types of surgery?

James. Yes. Obese individuals often have multiple underlying health problems that may lead to complications and increase the risk of complications from the procedure itself. For many, bariatric surgery is a last resort.

In addition, bariatric surgery

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Upcoming

No-shave zone

Banning the preop shave and other successes from a national project on preventing surgical site infections.

Patient tracking systems

A review of tracking systems and their place in improving efficiency.

Better pain management

What can be done to improve pain relief for ambulatory surgery patients?

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Publisher's Note

Tina glanced at the clock in the OR. It was nearly midnight on Christmas Eve. Both Tina, the OR nurse, and Joe, the surgical technologist, had been on call this evening.

"I still have presents to wrap, and we are having both our families for dinner tomorrow," groaned Tina. "And the kids will be up to open their presents at 6 am."

"I still have to put the model train around the tree," replied Joe. "It's been a family tradition since I was kid. Except that my dad put it up then. I wish he was still here to do it."

They stopped at the desk where Dr Martinez was finishing his notes. "Enjoy your holiday," said Tina.

"I am glad you were both here to help tonight with the emergency appy," said Dr Martinez. "Mr Ricardo will enjoy his holiday without having to face the possibility of a ruptured appendix."

"We weren't thrilled to be on-call tonight, but we are both glad to be able to assist," responded Tina.

Suddenly, the double doors to the OR burst open. A slim, elderly man bounced in as the three stared in disbelief.

"Who are you...and what are you doing here?" asked Joe sharply.

"Don't you remember?" asked the jolly little man as he stroked his long white beard. "You don't recognize me because I used to be...well, overweight. Some might say even obese. Fat. I believe you folks call it morbid obesity."

"I figured I was a bad example for all those children and adults who were eating too much and not exercising enough. I was concerned when I read that three out of five Americans are overweight. When obesity became a national public health problem, I knew I had to do something. I had tried all the diets—Atkins, South Beach, Weight Watchers, Pritikin, Scarsdale, the Grapefruit Diet, the Cabbage Soup Diet, Slim-Fast—but nothing worked."

"For me, it was those cookies that children left by the hearth on Christmas Eve—the chocolate chip cookies, the gingerbread cookies, the almond thumbprint cookies, the macaroons, the cinnamon stars, and the butter cookies...all washed down with a tall glass of chilled milk. Ah, delicious! But my downfall."

"So the missus and I decided that we needed to do something. We both had



laparoscopic gastric bypass procedures here about 18 months ago, and I wanted to come by and say thank you for changing our lives."

"Why, you're Mr Claus. I remember you well. You were so cheerful. I think you said you made and distributed toys for a living," said Tina.

"That's right. I have been doing that...well, it seems like for centuries," replied Mr Claus. "But with that weight, it was getting harder and harder for me to get around on Christmas Eve. The reindeer even filed a complaint with their union about having to fly with such a heavy load."

"Now our lives have changed. The wife and I, we walk every day with our dog, Santa Paws. We go to the gym several times a week—we do weights, Pilates, and Yoga, and we feel as fit as fiddles."

"Well, said Tina, "you have certainly changed your image. The rosy-cheeked, roly-poly Santa has been replaced by a slim, trim figure. It will take a bit of getting used to, but I think you are setting a good example for everyone."

Just then Mr Claus's cell phone rang. He answered it quickly, then said a quick goodbye as he dashed off. "More deliveries to good children," he murmured.

"Oh, what to leave for me? Just a bottle of Evian and some low-fat yogurt." ♦

—Elinor S. Schrader

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IOM ties nurses' work to patient safety

Changing the work environment of nurses is crucial to patient safety, said the Institute of Medicine (IOM) in a report released Nov 4.

The report calls for a broad set of reforms, including changes in how nurse staffing levels are determined and mandatory limits on nurses' work hours.

Nurses' typical work environment carries "many serious threats to patient safety," the committee said, citing research evidence.

Creating work environments that improve safety will require "fundamental changes" in how nurses work, how they are deployed, and the very culture of the organization, said Donald M. Steinwachs, PhD, a professor at Johns Hopkins University, who chaired the report committee. The report was sponsored by the federal Agency for Health-

The report calls for a broad set of reforms.

care Research and Quality.

Nurses, including RNs, LPNs and LVNs, and assistants, make up 54% of health care providers and provide most of the interaction with patients, the report noted. Their actions, such as ongoing monitoring, are directly related to better patient outcomes.

The committee cited studies showing

inadequate numbers of nurses are associated with more infections, bleeding, and cardiac and respiratory failure. Nurses can help defend against errors. One study showed nurses intercepted 86% of medication errors before they reached patients.

Despite such studies, nurses in some facilities are overburdened, with some assigned up to 12 patients per shift.

Specific reforms

The report called for specific steps to improve working conditions:

- updating nursing home standards to require at least one RN in a facility at all times as well as minimum staffing levels.
- increasing oversight when ICU staffing falls below one nurse for every two ICU patients
- avoiding use of temporary nurses to fill staffing shortages
- prohibiting nursing staff from working longer than 12 hours a day and more than 60 hours a week.

The report also advocated a much broader set of reforms to help repair "damaged trust" between nurses and management that has resulted from restructuring and other management changes over the past two decades. Key among the reforms are involving nurse leaders in all levels of management and consulting with nursing staff when making decisions about work redesign.

"Nurses are in prime positions to help pinpoint inefficient work processes that could contribute to errors, identify causes of nursing staff turnover, and determine appropriate staff levels for units," the report said.

The committee also called on organizations to dedicate more resources to help nursing staff build knowledge and skills through their orientation programs and continuing education. Such programs have been cut back, even though nursing administrators report newly licensed nurses lack the preparation to provide safe, effective care.

The report's recommendations could help health care organizations recruit and retain nurses, the committee noted. ♦

The report can be read online and prepublication copies can be purchased at www.iom.edu

Printed copies will be available early next year from the National Academies Press at 800/624-6242.

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Study on RN education stirs controversy

A new study linking bachelor's-prepared RNs to better patient outcomes has nurse leaders asking how facilities could hope to increase the number of 4-year graduates when it is tough to find nurses at all.

Some also question whether the evidence is strong enough to justify a major push.

The study by Linda Aiken, RN, PhD, and her colleagues from the University of Pennsylvania found hospitals with a higher proportion of nurses with a bachelor's degree or higher had lower death rates for surgical patients. The study was reported in the Sept 24 *JAMA*; 290:1617-1623 (www.jama.com). (See November *OR Manager*, p 5.)

The study is believed to be the first to link nursing education levels in hospitals with patient outcomes.

With a growing shortage of nurses, how can hospitals hope to meet staffing needs if they seek mainly bachelor's-prepared RNs?

The majority of RNs in practice—55%—are associate degree or diploma graduates, with only about 34% having a bachelor's degree or higher.

Some say more evidence is needed on outcomes.

"This certainly is a well-put-together study, but it is only from hospitals in one state and studied one patient population. More validation is needed," Rita Turley, RN, MS, president of the American Organization of Nurse Executives (AONE), told *OR Manager*. She doubts the study in itself will make a difference in how facilities staff.

The American Association of Community Colleges blasted the study, saying it "is riddled with inaccuracies and used flawed methodology." But the fact that the study was published in the prestigious *JAMA* means the methodology held up to peer review.

Greta Sherman, an expert on nursing recruitment and retention with JWT Specialized Communications Health Care Group, says she thinks "it is way past time that we take nursing to a new level and make the doorway to the profession a 4-year program."

She fears nursing has waited too long, "and the growing crisis will force providers to further embrace 2-year programs as the way to churn out RNs, regardless of outcomes."

Sherman added, "There is no question

Will hospitals seek to hire more RNs with bachelor's degrees?

there are many excellent AD-prepared RNs." She said she was surprised at the difference in mortality in hospitals with more BSNs because AD graduates tend to be older, and "maturity should also contribute to positive outcomes."

Making headway

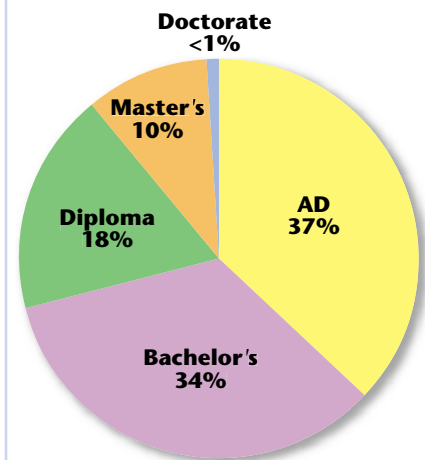
Though progress seems slow, some organizations are making headway in employing more bachelor's-prepared RNs. The armed forces require a bachelor's degree for active duty RNs.

The Department of Veterans Affairs (VA) reports that 62% of the RNs it employs have bachelor's degrees or higher. The VA launched a program in 1999 to increase the educational level of its RNs, committing \$50 million over 5 years to help nurse employees get their degrees. Under the program, the VA will continue to hire AD and diploma nurses for staff nurse positions, though new hires for higher-level positions must have a bachelor's degree or higher. By 2005, current employees will need to meet educational requirements to advance to higher-level positions. Waivers can be granted in certain situations. No nurses will lose a grade or step progression because of the requirements.

The VA provides tuition support for up to 3 years of full-time study. In return, a nurse is expected to give 1 to 3 years of full-time service to a VA facility. Each VA medical center has a local coordinator who assists nurses in developing a plan of study, completing the application, and obtaining funding. The centers further support students with flexible schedules and other resources. The VA also provides education funding for VA employees who are pursuing entry-level LPN and RN programs.

The Magnet Hospital program does not require a certain mix of RN education for magnet status. But magnet hospitals on average have 59% of RNs with

Highest education of practicing RNs



Source: US Department of Health and Human Services. National Sample Survey of Registered Nurses, 2000.

a bachelor's degree or higher, according to the American Nurses Credentialing Center.

The National Council of State Boards in a 2001 survey of employers found employers strongly preferred hiring BSN grads for nursing management and specialty positions.

There are now 620 RN-to-BSN programs that enable diploma and AD graduates to work toward 4-year degrees. At least nine states have statewide articulation programs to make it easier for nurses to advance to the baccalaureate level. Many hospitals are providing tuition support as a recruitment and retention incentive, making it more feasible for mid-career RNs to complete their educations.

Little action from Congress

In 2001, the National Advisory Council on Nurse Education and Practice advocated that two thirds of the nursing workforce be bachelor's prepared by 2010. To meet the goal, the nation would need to increase the number of RNs with 4-year degrees by almost 100% in the next 7 years.

The council called for the Secretary of Health and Human Services and Congress to expand funding and federal programs to prepare RNs. But so far, there has been little action from Congress. ♦

Continued from page 1

also serves as chief of anesthesia for KP's Southern California region.

During the safety briefing, all four team members bring up what is relevant about the patient and procedure—a missing instrument, whether blood will be needed, the timing of an intraoperative x-ray, medications on the sterile field.

It might be something as simple as, "My name is Bob. I haven't worked with

you before. Please let me know if I am doing something wrong or can help in any way."

Each OR has a whiteboard where the circulating

nurse writes the patient's name, diagnosis, and names of the team members. Research has shown that familiarity with other team members improves safety. In aviation, 74% of crashes occur on the first day a crew is working together.

At first, some objected the briefings would be too time-consuming.

"We role played to show it really didn't take much more time—maybe 30 to 45 seconds," Dr DeFontes says. "And it might actually save you 5, 10, or even 30 minutes in the procedure because you know up front what is going to be needed."

Hurry-up environment

He thinks the briefings make sense in today's hurry-up environment.

"Fast turnovers and good outcomes require teamwork. Every day in the OR, we have multiple handoffs between experts and novices and full-time and part-time staff, not to mention changes in the schedule and the patient's status," he notes.

The person who sets up the case may not be the one circulating or scrubbing. And except for short cases, it's routine for the staff to hand off to each other during the same case for breaks and change of shifts. The surgeon probably has not seen the patient since the office visit and has just finished another case or rushed in from the office.

With all of these factors, "there is a real need to create a team that has a shared

**Our surgeons
have really
embraced it.**

mental model for this particular patient and procedure," Dr DeFontes said.

During the briefing, team members are not supposed to be doing anything else.

"They are supposed to stop what they are doing and have a conversation," he says.

Borrowing from aviation

Dr DeFontes learned about the safety briefings when he attended human factors training given by KP and the University of Texas (UT) at Austin. UT's Psychology Department is known for its pioneering work in creating team environments in aviation and is now transferring that work to health care (sidebar).

He decided to take the idea back and turn it into a rapid-cycle improvement project for Orange County. The purpose of the project was "to improve safety by enhancing teamwork, collaboration, and communication among team members in the perioperative setting."

Specific objectives included:

- building awareness of the safety culture and identifying safety needs
- building support by enhancing staff knowledge of the existing OR culture and potential barriers to safety in that environment
- developing and implementing a safety briefing model to enhance communication and anticipation and management of threats and errors
- evaluating the model's success using pre- and post-attitudinal surveys.

Before the project started, OR staff and physicians completed a Safety Attitudinal Questionnaire (SAQ) to gather baseline data on their opinions on the OR's current team climate. The questionnaire, developed by UT, is designed to measure and compare physicians' and nurses' attitudes and beliefs about the safety climate in their practice area.

Developing the model

The safety briefing model was developed in Fall 2001 by an Orange County KP team representing OR staff and physicians from different disciplines, including union representatives. The team developed a one-page guide for conducting the briefing (sidebar). They also developed a brief education module with a short introduction to human factors and a post-test. The module is an easy way to introduce new staff members and residents to the briefings. The guide also is posted throughout the department, including in each OR.

As the team developed the model, they gathered feedback using an anonymous suggestion box and a short version of the SAQ. The whiteboard was one idea from the suggestion box.

The team took about 2 months to refine the model and provide education to the staff and physicians. They then conducted a 6-month pilot beginning in February 2002.

A significant impact

The team found the briefings had a significant impact.

No wrong-site surgeries have been reported since the briefings began. In reviewing incidents from 2001, quality managers determined the incidents might have been prevented with the briefings. They also found near-miss reports had gone up, indicating staff and physicians felt more comfortable reporting close calls. Reports of faulty or missing equipment and instruments declined slightly. The number of delayed or canceled cases also declined.

In addition:

- Employee satisfaction rose by 19%.
- Nurse turnover decreased from 23% to 7%.
- Staff ratings of the safety climate improved from "good" to "outstanding."

Physicians and nurses reported they thought OR problems were being identified and resolved earlier.

Among near misses caught was finding potassium chloride in a bin where Flagyl, an antibiotic, is stored. In another situation, a team caught a case that was scheduled as a thoracotomy when it should have been a thoracoscopy.

"We've seen a significant increase in those responding to items such as, 'Nurses' input is well received in the OR,

Kaiser Permanente Human Factors Safety Briefing Orange County Service Area

Surgeon	Circulator	Scrub person	Anesthesia provider
<ul style="list-style-type: none"> • ID patient and site • What type of surgery? • Realistic time estimate • What is the desired position? • Any special equipment needed? • Is this a standard procedure or are there special needs? • Are there any anticipated problems? • Will we need pathology? • Is a C-arm or portable x-ray unit needed, and has it been requested? • Are there any special intraoperative requests, ie, wake-up, hypothermia? • Plan to transfuse? Wet vs dry. • Use of drugs on the field? • Do you want lines? • Postop pain management special requests (blocks, etc) 	<ul style="list-style-type: none"> • Identify patient site and marking • Allergies? • Verification of medication on the back table • X-ray available and other special services (ie, pacemaker, Cell Saver, sales rep, laser) • Blood available? 	<ul style="list-style-type: none"> • What special instrumentation do we need? • Are any instruments missing from the tray? • Are all of the instruments working? • Are there any questions about the instruments? • Do we have all of the instruments? • What type(s) of suture or staples are needed? 	<ul style="list-style-type: none"> • What type of anesthesia will be used? • Risks? • Should we anticipate any problems? • Are there any special needs (eg, positioning, medications)? • Special lines driven by anesthesia

Note: These are examples only. Briefing questions are individualized to each case.

Human factors address the interpersonal skills generally implicated in adverse outcomes. It is about detecting threats to patient safety, avoiding errors, and managing in a team-based environment. In Orange County, the primary concept applied in the perioperative setting is the use of briefings similar to preflight briefings in the aviation industry.

A Safety Briefing is an opportunity for team members to share pertinent information regarding the patient's care prior to and during the surgical procedure. This allows all team members to share the same mental model.

Who participates in a Safety Briefing? There are four roles in a Safety Briefing, each equally important. A Safety Briefing is the responsibility of the entire team; however, the circulator is responsible for initiating the Safety Briefing.

When and where does a Safety Briefing occur? In the operating room, postinduction and precut.

Source: Anaheim Medical Center, Anaheim, Calif. Reprinted with permission.

'All OR personnel take responsibility for patient safety,' and 'Medical errors are handled appropriately here,'" adds Sheila Smith, RN, MHA, CNOR, Anaheim's department administrator for perioperative services.

Charge nurse Georgina Hayman, RN, adds, "At first, when we were learning it, the briefing seemed a little awkward, but now it only takes a few minutes. It prevents problems that can come up." For

example, the nurse can inform the surgeon at the beginning of a case that a piece of equipment he is used to has been replaced because it wasn't working.

Barriers come down

Dr DeFontes acknowledges that not everyone was enthusiastic at first.

"There are those who said, 'This is ridiculous. We're all professional. Let's just do our jobs.'"

To help get the project off the ground, he involved clinical champions. He also selected teams where the quality of care was high but communication gaps existed among the surgeons, anesthesiologists, and nurses.

"Once we got them all together in a room, they saw they all wanted the same thing—the best outcome for the patient. They also wanted less stress, and they

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Team communication and safety

Over the past 20 years, researchers at the University of Texas (UT) at Austin have found that how well cockpit crews communicate has a lot to do with the safety of flying.

Now these same researchers are exploring the connection between teamwork in health care and outcomes such as error rates and nurse turnover.

"We are marrying the idea of teamwork climate and collaboration with outcomes like nursing turnover, and we are beginning to demonstrate linkages," says J. Bryan Sexton, PhD, a social psychologist in UT's Center of Excellence for Patient Safety Research and Practice.

A few studies have been published, and more are in press. Kaiser Permanente drew on this research in its pilot for patient safety briefings in surgery (related article).

Some of the findings:

Does everybody know your name?

Like the Cheers theme, people rank teamwork more highly if they know the people they are working with.

In a study conducted at the University of Basel in Switzerland, researchers stood outside 12 ORs for 3 days and asked clinicians coming out of surgery a few brief questions. They asked them to rate the quality of communication in that team on a 10-point scale. They then asked them to give the names of the other individuals involved in the procedure.

"We found we could predict a person's communication score using two different methods," says Sexton. The first was the percentage of names the person got correct (whom you know), and the second was the percentage of the rest of the team who knew that person's name (who knows you).

The importance of knowing team members' names is not unique to medicine, Sexton notes. The National Transportation Safety Board has found that 74% of accidents in commercial aviation happen on the first day a crew is flying together.

He collaborated with Swiss physician Nicholas Milliet in the study, which is unpublished.

Nurse turnover is lower when team collaboration is high

Nurses who rate teamwork between RNs and physicians as high are more likely to stay on the job.

UT researchers surveyed individual nurses on a patient care unit for their attitudes about the teamwork climate. Three years later, they went back to see how many nurses were still there.

Among nurses who had rated teamwork as low, there had been 40% turnover over the 3 years. Those who rated teamwork as high had a much lower turnover, 23%, for the same period. The data have not yet been published.

In a recent study at Johns Hopkins Hospital in Baltimore, the researchers found that improving teamwork and the safety climate resulted in improved clinical outcomes (bloodstream infection rates, length of stay, and error rates) as well as improved nurse turnover, which declined from 9% to 2%. The study by Peter Pronovost, MD, and colleagues has been submitted for publication.

Nurses and physicians see the culture differently

In a study of 1,033 physicians and nurses working in ORs and intensive care units in the US and abroad, surgeons and surgical residents reported high levels of teamwork with other surgeons and surgical residents, with scores of 64% or above. But anesthesia residents, nurse anesthetists, and surgical nurses had a much different perception, with only 10%, 26%, and 28% rating their teamwork with surgeons as high.

In intensive care, though 77% of physicians reported high levels of teamwork with nurses, only 40% of nurses felt the same about teamwork with physicians.

The study by Sexton, E. J. Thomas, and Robert J. Helmreich was published in the *British Medical Journal*. March 18, 2000;320:745-749.

Information about the University of Texas's Center of Excellence for Patient Safety Research and Practice, is at www.uth.tmc.edu/schools/med/imed/patient_safety

Continued from page 9

wanted to solve problems. They saw the briefings were a way to do that. Then the barriers came down.

"Our surgeons have really embraced it," he adds. Those who didn't initially tended to be those who didn't use the facility often. In a few cases, DeFontes made calls to explain the project. "When they understood, they would say, 'Oh, this is a great idea.'"

The briefings have also helped novices feel more like part of the team.

"The way experts and novices process information and communicate is very different," Dr DeFontes notes. "It is important to make sure the least experienced person on the team is on the same page as everyone else. Usually, that is the person who is going to identify something is wrong. If you haven't empowered that person or given them the information, they aren't going to be able to do that."

He knew the project was headed in the right direction when a nursing student came up to him one day and said, "This is wonderful. Before, they didn't even know my name. I didn't feel confident enough to point anything out because they didn't even acknowledge me as part of the team." The briefings have given her more confidence to speak up. The student then said she wanted to come to work at Anaheim.

Now the norm

Safety briefings have become the norm in Anaheim's ORs and are required for every case around the clock. They are part of nurses' skill assessments. Every new physician who joins the staff receives the education module, with the quick post-test. The module also is posted in hallways, ORs, bathrooms, and on bulletin boards.

The team is already working on a process for postoperative debriefings and briefings at handoffs and breaks.

Safety briefings are being expanded to the hospital's radiology and labor and delivery areas as well as to other hospitals in Kaiser's network. Kaiser also reports receiving inquiries from other organizations, including Harvard and the University of Michigan. ♦

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Fast facts on obesity trends

- 60% of Americans are overweight or obese.
- 2% of Americans are morbidly obese (more than 100 pounds overweight).
- Comorbidities common to obese individuals include:
 - diabetes
 - impaired cardiac or respiratory function
 - hypertension
 - urological malfunctioning
 - hormonal imbalance
 - long-standing psychological issues owing to social isolation and ostracism.

Continued from page 1

involves much more than the competency needed to perform the procedure. The hospital must have equipment ranging from large-sized tourniquets to special lifting and moving equipment. Surgical instruments, including larger retractors, will be needed if the procedure is converted to an open case.

There can be numerous postoperative complications, though they are not necessarily unique to this surgery: infection, thrombus, organ injury, gallbladder disease, brain injury, apnea, sepsis, depression, retention of foreign body, nutritional problems, and malabsorption problems including neuropathy.

It is often difficult for patients to understand that these complications may be unavoidable and do not necessarily reflect errors by providers.

Liability issues frequently arise over privileging, staff education, instrumentation, informed consent, and airway issues. Morbidly obese patients usually have difficult airways. The mass around their neck and chest makes it difficult to intubate and ventilate them efficiently.

Finally, patients often complain they were not fully informed of specific risks of bariatric surgery, although the literature suggests informed consent should be very detailed.

Q. Our surgeons are beginning to perform laparoscopic surgery for obesity. What are the risks for that?

Woman's death highlights obesity surgery risks

The death of a 37-year-old woman two days after she had gastric bypass surgery at Brigham and Women's Hospital in Boston highlights the risk of a rapidly growing surgery, the *Boston Globe* reported Nov 6.

The woman died in her hospital bed minutes after she asked a nurse to help her up from a chair so she could lie down, according to the report. The hospital had not yet determined the cause of death, but the chief of surgery, Michael Zinner, MD, told the *Globe* that doctors believe a stapler used in the surgery misfired, and some staples came undone.

Brigham & Women's suspended laparoscopic gastric bypass surgery until it completes an investigation, the *Globe* reported. The hospital said the surgeon has performed hundreds of gastric bypasses and did not believe a lack of training was to blame.

According to the report, the surgeon began the case laparoscopically but converted to open surgery after one row of staples did not hold, and he

closed that portion of the stomach manually. During the autopsy, doctors discovered another row of staples had come undone, Brigham's chief medical officer said in an interview with the *Globe*.

The stapler used, an Endo GIA Universal, is made by US Surgical, a division of Tyco International.

The company said in a written statement to the *Globe*: "More than 500,000 surgeries have been performed with this device since 1998, and incidents like this are extremely rare."

Though bariatric surgery is increasingly popular, patients face serious risks. In bariatric programs at academic medical centers like Brigham & Women's, about one in 200 to 300 patients dies of complications of surgery, physicians told the *Globe*. That compares with fewer than one in 1,000 deaths from gallbladder surgery and two or three deaths per 100 for coronary artery bypass procedures.

—*www.boston.com*

James. There are special issues with laparoscopic surgery. Obese patients are more likely to pose problems for laparoscopic visualization because of body mass and inadequate gas expansion. Trocar injuries are a concern.

If a laparoscopy surgical case must be converted to an open procedure, surgeons and OR teams may not be prepared for the differences in instrumentation, strength, and technique.

Complications and the lawsuits that follow these procedures are not unlike the cases seen when laparoscopy was first introduced. Some surgeons performing bariatric surgery may have limited experience with laparoscopic techniques. They may have attended only brief training programs and perhaps had limited proctoring. The organization may not have a strong program for approving new surgical privileges or even for requiring a surgeon who previously performed laparoscopic procedures to present proof of additional training and proctoring for bariatric surgery.

Q. What are the most frequent types of claims from bariatric surgery?

James. According to the Physician Insurers Association of America (PIAA), the most frequent allegations include:

- Improper performance of the procedure
- Retained foreign body
- Diagnostic errors
- Procedure performed when not indicated or when contraindicated.

Bariatric surgery claims have a higher severity of injury and higher indemnity than other claims in PIAA's database.

A number of claims have arisen from the work of a few surgeons. Some surgeons have performed procedures not approved by their hospital or for which they did not have privileges.

Q. What are your recommendations for addressing these risks?

James. First, I would recommend that a hospital considering opening a bariatric surgery program visit a site that

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in the *OR Manager* print version.

Credentialing for bariatric surgery

American College of Surgeons

ACS recommends that surgeons practicing bariatric surgery be board certified or in the process of being certified following a residency in general surgery. Bariatric surgeons also should have an understanding of morbid obesity as a disease and an intimate knowledge of conditions associated with morbid obesity. Included are recommendations for hospitals and other personnel participating in bariatric surgery.

—American College of Surgeons. *Recommendations for facilities performing bariatric surgery. ST 34. September 2000. www.facs.org. Look in Table of Contents under Statements and Guidelines.*

American Society for Bariatric Surgery

The society outlines recommended requirements for credentialing and granting privileges in open and laparoscopic bariatric surgery. The global credentialing requirements include, in addition to surgical credentials, working with an integrated program for care of the morbidly obese and documenting a system of patient follow-up. The privileging recommendations include guidelines for proctoring, documentation of outcomes, and review of outcome data.

—American Society for Bariatric Surgery. *Guidelines for granting privileges in bariatric surgery. www.asbs.org/html/guidelines.html*

Continued from page 12

performs a high number of these procedures. Also, devote time to clarifying what patients should be accepted into the program. Some facilities have determined the decision should be made by an independent team of physicians and the patient, not just the patient and operating surgeon.

Other suggestions:

- Pay attention to medical, nutritional,

and psychological evaluations and appropriate interventions prior to surgery. Many patients have sleep apnea preoperatively, and the problem is overlooked postoperatively. Co-existing medical conditions should be closely followed postoperatively.

- Encourage patients to participate actively in developing an understanding of this life-long and life-changing event.
- Employ a detailed informed consent process and use multimedia educational resources to prepare patients adequately and provide guidance for both immediate and long-term issues.
- Develop a consent form outlining the risks and complications of the procedure, alternative methods of treatment, and risks of the alternatives. It is recommended that the form be completed and signed by the patient and surgeon well in advance of the procedure. To help minimize the chance of future denials by the patient, have the patient initial each complication or risk.
- Be sure documentation reflects the extent of the informed consent process. A variety of bariatric program web sites give patients additional perspectives—positive and negative. Simply go to www.google.com, enter the words obesity surgery, and see the results.
- Make sure the organization, by specific action of the medical staff, carefully reviews the types of procedures that will be allowed in the facility and specific privileges of surgeons for the approved procedures. The American College of Surgeons and the American Society for Bariatric Surgery have guidelines for credentialing and privileging (sidebar). The medical staff should also consider recredentialing criteria, including the minimum number of procedures to maintain competency and a plan for training and/or proctoring if these criteria are not met.
- A thorough anesthesia preoperative assessment and an anesthesia care path with an algorithm would help anesthesia providers predict and respond to the common airway and ventilation complications.
- Develop a team approach to long-term management of patients, including postoperative management in

outpatient settings. Case reviews, grand rounds, standardized forms, and data collection tools can be helpful in tracking progress and complications.

- Because long-term follow-up care is needed, having a mechanism for reporting data to a central repository would help provide information for continuous improvement.
- Plan for equipment and lifting needs for the staff from admission to discharge. The plan should anticipate the many types of complications, including returns to the emergency department.

Many organizations find out too late that they overlooked the need for special equipment, resulting in patient or worker injuries. It may be helpful to retain a consultant to evaluate these needs. Emphasize that the staff should be educated and trained before the institution initiates bariatric surgery. ♦

Resources

American College of Surgeons. *Recommendations for facilities performing bariatric surgery. ST 34. September 2000. www.facs.org. Look in Table of Contents under Statements and Guidelines.*

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Levesque W. Suits mount against surgeon. *St Petersburg Times.* June 23, 2002. www.sptimes.com

Evolving role of the specialty coordinator

Specialty coordinators are emerging as leaders in the surgical suite. Their role is key to maintaining a smooth operation in busy, specialized ORs. They take on some management functions, such as coaching the staff and coordinating resources. For some, the role has grown to include hiring, firing, disciplining, and evaluating staff. They also may have staff education and capital budget responsibilities. At the same time, they remain close to the staff and the surgeons.

The role has elements of a head nurse and a team leader. Like head nurses, specialty coordinators manage the daily OR schedule but are focused on a specialty or group of specialties. Like team leaders, they manage their specialty's resources, coordinating staff assignments, responding to surgeons' needs, and making sure their rooms have the right supplies and equipment.

The role and requirements have evolved differently depending on each hospital's culture. Education is not as important a qualification as experience. Some coordinators are salaried, and some are paid hourly, making from 5% to 20% more than a staff nurse.

Combined team leader, nurse manager

At Presbyterian-St Luke's (PSL) Medical Center in Denver, specialty coordinators work as a combined team leader and nurse manager. Before the management structure was flattened a few years ago, they were considered managers. They had resource responsibilities but did not staff the rooms. Now they help staff the rooms about 95% of the time and work in their specialty every day.

"They are the resource people for their specialties," says Tammy Woolley, RN, MS, CNOR, associate chief nursing officer. "If a surgeon has an issue, he goes to the specialty coordinator first."

The management structure of PSL, part of HealthOne, a joint venture with the for-profit HCA chain, is very flat. Woolley is responsible for ten departments, with only two positions, clinical coordinators and specialty coordinators, between her and the staff.

The specialty coordinators are one pay grade above a staff nurse and make

about \$4 more per hour. They are required to have 5 years' experience, with a bachelor's degree preferred.

Providing clinical leadership

At St John Hospital in Detroit, "Our specialty coordinators are our specialists for clinical areas," says Darlene Beaudet, RN, OR clinical manager.

They work closely with the surgeons and attend the surgeons' specialty section meetings. They are responsible for updating preference sheets and making sure case supplies and instruments are picked correctly. They work closely with the surgeons in evaluating and introducing new equipment and providing related in-service education.

St John has seven specialty coordinators for its 19 ORs, each in charge of one to three specialties. Four have BSNs, but that is not a requirement. They must have at least 2 years of experience in their specialties.

When Boston's Massachusetts General Hospital (MGH) began developing the specialty coordinator position, the management team discussed both education and experience requirements but decided experience was the most important.

"I backed off on the academic requirements because I saw clinical leadership experience as more important," says Marion Freehan, RN, MPH/HA, CNOR, nurse manager for MGH's 40 ORs. She wanted persons who had been in a team leadership role and had experience in project management and process improvement, which entail problem solving and judgment calls.

The major role of MGH's six specialty coordinators is to be proactive, coordinating human and material resources for efficient utilization of the OR's resources.

At Boulder Community Hospital in Boulder, Colo., the six specialty coordinators who cover the 15 ORs are true managers, says Hallie Stuart, RN, BS, director of surgical services. They hire, fire, and discipline. They conduct interviews for new staff and perform the staff's reviews.

"If they choose to terminate an employee or if counseling becomes more than just a verbal warning, they always run it by me, but otherwise it is their

Specialty coordinator responsibilities

Responsibilities for specialty coordinators at Rex Health Care, Raleigh, NC:

- Coordinate individual services by standardization of inventory—reviewing and changing custom packs and instrument trays.
- Review the schedule and look for special equipment needs for future cases.
- Participate in staff education.
- Create new preference lists or edit preference lists along with the preference list coordinators.
- Oversee automated shared resource file for equipment.
- Attend service line meetings and serve as hospital representatives at some surgeons' meetings.
- Coordinate and oversee needs of new doctors, new equipment, or new procedures.

responsibility," says Stuart.

A chief responsibility is to be a point person for the physicians. If doctors have an issue, they take it to the service coordinator first.

"It gives the doctor the immediate response, support, and follow through that I think is extremely important," says Stuart.

Cultivating the staff

Specialty coordinators often have roles in orientation and staff education.

PSL's specialty coordinators serve as preceptors in their specialties, orienting new staff to scrubbing and circulating. They conduct performance appraisals but do not hire, fire, or discipline.

St John's coordinators are responsible for orienting the staff in their specialties but not for hiring, firing, or discipline.

Though new staff members are not hired for a specialty, when they near the

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end of their general orientation, they submit a request to work in a specialty. The specialty coordinator is told of the new employee's interest, and the coordinator and the team members decide whether the person is a good candidate for that specialty.

"Instead of just putting people together, we would rather that the coordinators and staff in that core interview the new people and accept the ones they want," says Beaudet.

The specialty coordinator chooses a preceptor to assist in the new employee's orientation.

The coordinators are not solely responsible for performance appraisals but participate in them. Because they work closely with staff daily, they are in a good position to evaluate performance.

At MGH, specialty coordinators are becoming more involved in hiring and performance appraisals as the role evolves.

"Their help with performance appraisals is the big thing for me," says Freehan, because they are familiar with each person's daily work. Coordinators also are becoming more involved in resolving conflicts among staff and surgeons. They work with staff development coordinators on orientation and are responsible for making sure orientees meet requirements for their cluster. They also make sure all staff have in-service education on new equipment.

Serving as resource experts

As clinical experts, specialty coordinators aid in evaluating and selecting new equipment and in preparing the staff to use it.

At Rex Health Care in Raleigh, NC, the four coordinators serve on a surgical services value analysis team, which also includes the resource analyst and resource manager. They help make decisions about new equipment and arrange for trials and in-services.

The specialty coordinators for the 26 ORs are "basically in charge of new doctors, new equipment, and new procedures," says Lynda Drye, RN, BSN, resource manager for surgical services. (See job description.)

At Boulder Community, Stuart shares the status of capital and operational budgets with the specialty coordinators in

A chief responsibility is to be a point person for the surgeons.

weekly direct-report meetings. The coordinators discuss equipment needs for the next year with the surgeons and anesthesiologists and provide recommendations about which devices to buy, with justification.

Salaried or hourly?

At St John, specialty coordinators are paid on an hourly basis, but management is considering making the position salaried. One reason the coordinators are not currently salaried is that some take turns running the OR on Saturdays, and some take call for their specialties.

Specialty coordinators are salaried at MGH, with 24-7 accountability for their services. Though the specialty coordinators are considered managers at Boulder Community Hospital, they are still paid hourly, making from 15% to 20% more than a staff nurse.

"I started the specialty coordinator role to give the nurses a higher step on the ladder to strive for," Stuart comments. They do not have to take call or work weekends.

At Rex Health Care, the coordinators are paid hourly, and they do not take call or work weekends.

Building a team concept

United Hospital in Cheyenne, Wyo, recently refocused the specialty coordinator role for its ten ORs to a team concept. The six specialty coordinators have been divided into two teams and serve as team coordinators for a group of specialties. One team is responsible for general, OB-GYN, cardiothoracic, and vascular surgery, and the other oversees ophthalmology, orthopedics, and neurosurgery.

Previously, the position had become "too one-person oriented," notes the OR supervisor, Kari Wilson, RN, BSN. "The doctors thought only one specialty coordinator

over their service could handle their problems, and only that one person could be in the room."

Duties formerly carried out by one coordinator now are performed by the team. In addition to coordinating the rooms each day, coordinator teams relieve staff for breaks, lunches, and turnovers. They make sure rooms are running on time, cases are picked correctly, and needed equipment is available.

For capital equipment, three now decide which equipment to recommend for their specialties. They set priorities for capital purchases among themselves before submitting a recommendation.

Two coordinators are on resource call each night, so someone from each team is on call 24 hours a day 7 days a week. They are paid hourly and make from 5% to 8% more than staff nurses. Wilson is sending all of the coordinators to leadership training courses.

Mentoring new leaders

Leadership training offers the coordinators insight into the possibilities for management, says the OR director, Kathy Green, RN, MBA, CNOR.

"As a director, I have come to realize the importance of mentoring new leaders. Our coordinators are aware that they have been chosen as future leaders."

Adds Wilson, "What I am doing with the coordinator role is a model of what I want to focus on for the whole OR. I want the staff to see everything as a team concept, not just one person who can handle issues."

The coordinators didn't see the advantages of the team concept in the beginning but now like the fact there are three people to make decisions and for surgeons to go to. They don't have to deal with problems after vacation because there are two other coordinators to handle situations that arise.

At first the surgeons also were nervous about the change, but they are seeing the advantage of having other coordinators available when one coordinator is out, says Wilson.

"We are giving this a try for 6 months," she adds. "My management style philosophy is teamwork. None of us can run an OR by ourselves. This is getting everyone to think in team terms." ♦

—Judith M. Mathias, RN MA

Frequent questions on OR fire safety

A quarterly column on technology trends for surgical services.

ORs are brushing up on fire safety since the Joint Commission on Accreditation of Healthcare Organizations issued a Sentinel Event Alert on preventing surgical fires in June.

The alert raises the bar on what organizations need to do to prevent OR fires.

JCAHO's major recommendations are:

- the administration alerting the surgical staff (including surgeons and anesthesiologists) about controlling heat sources by following electrosurgical and laser safety practices
- managing fuels by allowing enough time for the patient prep
- establishing guidelines for minimizing oxygen under the drapes
- testing procedures for responding to fires with the staff
- encouraging fires to be reported to JCAHO, the Food and Drug Administration, and ECRI.

Virtually all surgical fires can be prevented, and their impact can be lessened if the team understands fire and how to fight it.

These are some questions posed by attendees at a session on surgical fires at the Managing Today's OR Suite conference Sept 17 to 19 in San Diego.

The responses are based on the hundreds of surgical fires ECRI has investigated over the past 25 years. Because of this experience, JCAHO consulted with ECRI in developing its alert.

Q.What is ECRI's recommendation on use of fire blankets in OR fires?

A. We do not recommend that fire blankets be used for surgical patient fires. We believe fire blankets provide a false sense of security.

In a fire where patient hair and OR table drapes are involved, you will likely have only a few seconds to react before the patient is seriously burned. You do not have enough time to get the fire blanket off the wall, unfold it, and apply it to the patient.

The best approach to extinguishing a drape fire is to immediately turn off the flow of gases to the patient, pull the

Make sure the patient's skin is dry before draping.

drapes and other burning materials off the patient, and extinguish the fire on the floor, either by stamping it out or with a CO₂ fire extinguisher if indicated.

Other problems with fire blankets are that the blanket may trap oxygen being delivered to the patient that also is feeding the fire, and the fire can continue to burn. The typical wool fire blankets may burn themselves if the oxygen is still flowing to the patient, adding fuel to the fire. The blanket also can cause further injury by displacing sharp instruments left in the sterile field.

Another issue is fire blanket packaging, which is not consistent among manufacturers. It may take extra time to figure out how to get the package open.

Q.What do you recommend for fire extinguishers in the OR?

A. We recommend a 5 lb CO₂ fire extinguisher in each operating room. We do not recommend water, dry chemical, or water mist extinguishers.

The CO₂ extinguisher should be mounted inside the OR near the entrance.

A CO₂ extinguisher can extinguish small OR fires on cloth, plastic, or paper as well as any burning liquid or electrically energized fires. CO₂ extinguishers will work in an oxygen-enriched environment. Equally important, CO₂ extinguishers don't leave a residue and won't harm the patient, staff, or equipment.

Fire extinguishers are rarely needed in OR fires. Extinguishers have been used in only three or four of the hundreds of OR fires ECRI has investigated.

Fast facts on surgical fires

- At least 50 to 100 surgical fires take place in the US each year.
 - 10% to 20% result in serious patient injury.
 - One or two are fatal, usually from tracheal tube fires.
- 78% are oxygen enriched from open oxygen sources on the patient's face.
- Ignition sources:
 - 68%: Electrosurgery
 - 13%: Lasers
 - 19%: Other sources such as hot-wire cautery, light sources, and bur sparks
- Locations on body:
 - 34%: Airway
 - 28%: Face, head, neck, chest
 - 24%: Elsewhere on body
 - 14%: Elsewhere in body

Source: ECRI.

Q.Because so many of the fires in the OR occur in the head and neck area, do you recommend extra suctioning under the drapes when an oxygen mask and electrosurgery are being used during head and neck surgery?

A. No, except for suctioning deep in the oropharynx (discussed below). Rather than suctioning, the key is to limit the oxygen concentration underneath the drapes or to dilute the gases.

For head and neck surgery, we recommend not using an open oxygen source, such as a cannula or mask, unless absolutely indicated. These indications should be formally reviewed by the anesthesia department as part of the guidelines that JCAHO recommends be developed in its alert.

If supplemental oxygen is needed, use the lowest concentration possible, monitoring the patient's O₂ saturation with pulse oximetry.

If an open oxygen source must be

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Technology in Surgery

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used, warn the surgeon of the fire hazard. The risk can be minimized by stopping the flow of oxygen, if possible, at least 1 minute before using the electro-surgical probe.

The best preventive measure is good communication between the surgeon and the anesthesiologist.

For surgery in the confined space of the oropharynx, such as during a tonsillectomy, suctioning with a probe deeply placed near the target tissue can help minimize the buildup of oxygen that may leak around an uncuffed tracheal tube.

Q.What should we be doing about skin prepping agents for fire safety?

A. Some commonly used surgical prepping agents, such as DuraPrep, Chloraprep, and Preveil, contain alcohol plus another antiseptic. Alcohol also is sometimes used as a skin prep straight from the bottle. Alcohol gives off flammable vapors while drying. Some products prominently warn of the fire risks in their packaging and on the applicator, while others address the risk only on the packaging.

Caution the OR staff to make sure the prepping agent is not allowed to pool or saturate the drapes, patient hair, pillow, or table linens. Also make sure the patient's skin is dry before draping. Nurses have to be empowered to say to physicians, "The skin isn't dry. We can't drape yet." You are using alcohol-based prepping agents to save time—but you have to let them dry.

Q.How should we be conducting our fire safety drills for OR staff?

A. In addition to the standard fire drill elements for health care facilities (eg, closing fire doors; knowing the location and operation of fire extinguishers, fire alarms, and fire exits; and knowing the location, operation, and coverage area for medical gas zone valves and electrical supply panels), consider the following elements specific to the OR:

- The proper immediate and follow-up response of each surgical team member. For example:
—Surgeons should immediately remove burning materials with pos-

sible assistance from nurses.

—Anesthesia staff should disconnect the breathing circuit.

—Nurses and other staff members (eg, perfusionists, neurologists) should extinguish burning materials and alert the surgical suite staff.

- How to move the patient easily and safely to another OR if necessary.

Q.We have begun using alcohol-based hand rubs for the surgical scrub. Is there a fire safety issue with these?

A. Some facilities have run into problems with fire codes when installing dispensers, particularly in exit corridors.

In October, the Hospital Fire Marshals' Association's executive committee unanimously voted to support the installation of alcohol-based hand-washing gels in corridors.

After reviewing information from all of the professional groups associated with this issue, the association concluded that the risk of fire was minimal compared with the risk of spreading infection. The association considered the fact that the gel is used more often when it is convenient for caregivers.

The association also relied on a fire-modeling study of alcohol-based gels commissioned by the American Society of Healthcare Engineering. The study indicated that dispensers with 1 L or less of gel could be safely installed in corridors as long as the dispensers were spaced adequately and were not in carpeted areas.

In reviewing the history of fires in health care facilities, the fire marshals' association did not find any incidents where a fire originated in a corridor. Most fires were in patient rooms and most often were related to smoking, electrical systems, or oxygen.

The fire codes usually cited are NFPA 30 and NFPA 101 (Life Safety Code), which focus on bulk storage, not low-volume dispensers.

The fire marshals' association is recommending that coding authorities review the codes with this in mind.

The Centers for Disease Control and Prevention (CDC) offers the following safety tips:

- Rub hands until the alcohol has evaporated and the hands are dry.
- Store alcohol-based hand rubs away

from high temperatures or flames.

- Store supplies of alcohol-based hand rubs in cabinets or areas approved for flammable materials.

For more information, see the CDC's web site at www.cdc.gov/handhygiene/firesafety ♦

—Mark Bruley

Vice President, Accident and Forensic Investigation
ECRI
Plymouth Meeting, Pa

ECRI Resources

Free poster: Only you can prevent surgical fires, plus other publications on OR fires. Go to www.mdrs.ecri.org Enter search term, "fires."

A clinician's guide to surgical fires: How they occur, how to prevent them, how to put them out. *Health Devices*. 2003; 32(1):5-24. This article rates eight OR fire safety videos. To purchase a copy, contact ECRI at 610/825-6000 ext 5888.

ECRI, a nonprofit organization sometimes called the Consumer Reports of health care, is known for its objective approach to medical device evaluation. www.ecri.org

Fires associated with anesthesia machines

Over the past 4 years, ECRI has investigated four fires that started in the carbon dioxide absorber stack in anesthesia machines.

Common elements were use of sevoflurane, Baralyme CO₂ absorbent, low oxygen flows (eg, 4 L/min), and conditions that contributed to drying of the absorbent. A related issue is carbon monoxide produced by a chemical reaction between the absorbent and halogenated anesthetics.

The key point about these fires is the dried CO₂ absorbent that allows these reactions to occur.

Carbon monoxide production and fire are a risk with any dry absorbent and halogenated anesthetic, ECRI cautions.

ECRI recommends installing fresh absorbent at least once a week, especially in anesthesia machines primarily used for children. ♦

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Planning a family visit program for PACU

Family visitation in the postanesthesia care unit (PACU) is gaining attention as a means of improving patients' surgical experience. Traditionally, nurses have resisted visitation because of concerns about interruption of patient care, lack of space, violation of privacy, and difficulty in controlling visitors' behavior, as well as disruption of routines. But new information indicates that PACU visitation benefits patients, families, and even nurses.

Research beginning in 1987 has shown that adult patients with visitors in the PACU scored lower on measures of anxiety than patients without visitors. Children whose parents visited cried only half as much as other children. When given the option, 98% of families chose to visit the PACU, and nearly as many reported a positive experience. A survey of families found that seeing the patient immediately after surgery was their second most important goal, after speaking with the physician.

In published studies, nurses reported that having family members in the PACU actually helped them perform their jobs. Families are less anxious about loved ones and less likely to wander about looking for them when they know a visit is scheduled. Nurses are able to answer families' questions and provide reassurance during the PACU visit.

Trends in health care are motivating organizations to set up or refine PACU visitation programs. Recovery from anesthesia is faster, and regional anesthesia is growing more common. Patients and families are increasingly knowledgeable and involved in their own care. Health care facilities are competing for business, and PACU visitation increases patient satisfaction.

In April, the American Society of PeriAnesthesia Nurses (ASPAN) approved its Position Statement on Visitation in Phase I Level of Care, which cites benefits of visitation and its desirability as hospital policy.

Establish a policy

Key considerations in designing or improving a PACU visitation program are in the sidebar on p 21. The first

Patients with visitors in the PACU scored lower on anxiety.

steps are to establish a firm policy and to gain the support of all staff members.

Ellen Sullivan, BSN, RN, CPAN, nurse-in-charge of the PACU at Brigham and Women's Hospital, Boston, said in an interview with *OR Manager* that part of the opposition to PACU visitation comes from a misguided view of its purpose. "Often when you say you have a visitor program, people misunderstand and think of it as visitors all over the place or people coming in and sitting down and staying at the bedside." Instead, the program must be well controlled.

Seek staff buy-in

PACU nurses may also oppose visitation if the policy is vague and if they are not given control over the timing and conduct of visits. Lisa Jeran, BSN, RN, CPAN, clinical supervisor at North Shore University Hospital, Long Island Jewish Health Care System, Plainview Campus in Plainview, NY, affirms that a PACU visitation program "needs to have a policy and procedure developed with management and the nurses who provide care so everyone has buy-in, and there's a set way to do it."

The experience of Memorial Sloan-Kettering Cancer Center in New York City illustrates one way to change staff resistance into acceptance. At first, surgical nurse coordinators monitored the PACU and arranged visitation. Some PACU staff members were unhappy because the plan was not well coordinated, and they did not have jurisdiction over visits. PACU nurses reported unescorted visits, disruption of patient care, privacy concerns, and space constraints.

To solve these problems, a commit-

tee was formed to improve the visitation procedure and clarify the role of the PACU nurses. After reviewing the literature and considering what they would want for their own families, all nurses became convinced of the value of visitation. Accordingly, the committee adopted a formal policy statement: "Visitation is both a patient right and a beneficial tool in caring for the postoperative patient." The new policy was discussed in workshops and incorporated into the policy and procedure manual.

Set guidelines for visitation

PACU leadership should decide:

- which family members and how many can visit
- when visits will occur
- how long visits will last
- how visitors will reach the PACU
- whether family will be involved in patient care.

At Brigham and Women's Hospital, the family waits in the family liaison area. After the patient has been in the PACU for about an hour, a family liaison calls to see whether it is a good time for a visit. Family liaisons are permanent staff members who answer phones, log families in, and assist with families' needs. They are not health professionals but people with strong social skills who enjoy working with families.

The PACU nurse decides whether the patient's condition permits a family visit. There are no restrictions on the number of family members as long as the PACU is not too busy. A volunteer escorts the family to the bedside. Once family members reassure themselves about the patient and speak with the nurse briefly, they are escorted back to the waiting area.

Some programs do not use escorts, but Sullivan considers them important so "the family isn't lost in the hallway; they're not wandering around unsure of what bed to go to." Waiting-room staff or volunteers are also useful to take telephone calls from the PACU and to relay information about the patient.

At Memorial Sloan-Kettering, the PACU nurse calls the family in the waiting room within 90 minutes after

the patient enters the PACU. A visitation plan is tailored to the family's needs, with no limits on the number of visitors or the time allowed. The family is instructed how to reach the PACU. A card kept at the bedside documents when the patient was admitted to the PACU, when the family was contacted, and when visits will take place.

Another option is to limit the number of visitors, allow extended visits, and have families help with patient care. Typically, children can have both parents visit, but Jeran believes adult patients should have one visitor at a time.

"When you have two people, the one who's not actively caring for the patient starts looking around," potentially compromising the privacy of other patients.

This is why, she says, "I'm an advocate of putting the family to work because I think it keeps them concentrated on the patient." Family members can give ice chips, alert the nurse if the patient has pain, hold a basin if the patient is vomiting, and calm agitated children.

Jeran emphasizes that PACU visitation policies will differ among ambulatory surgery centers, community hospitals, and tertiary care centers because of varying types of patients and procedures. Some facilities use 30 minutes as a guideline for settling patients in the PACU, others 3 hours. Visits may be permitted earlier for pediatric patients than for adults. The PACU must decide what criteria will indicate that patients are ready for visitors, although common indices are a stable airway, sufficient pain control, and adequate responsiveness.

Visits may vary from a few minutes for adults to indefinitely for children, or visits may be timed every hour for ICU patients or those waiting for hospital beds. Obviously, says Jeran, "The level of acuity of the patient really has a lot to do with the length of the time that the family can stay."

Ensure patients' privacy

Patient privacy is a concern, particularly in an open area such as the PACU. Jeran warns, "When you do have a visitor who isn't attending to the patient, who's moving around the room or peeking around, then it's appropriate to ask them to leave."

Responses from families were overwhelmingly positive.

Sullivan says invasion of privacy is not an issue at Brigham and Women's Hospital. Because family members arrive at an appropriate time, are escorted to the correct bedside, and stay briefly, they are focused on their own relative and are not able to look at other people's charts or overhear conversations. If a medical problem arises with a nearby patient, visitors are asked to leave.

Sullivan believes concern over HIPAA (the Health Insurance Portability and Accountability Act) has been exaggerated.

"I like to call it 'HIPAAsteria,'" she says. "There's so much misinterpretation of what HIPAA's all about. It was never meant to disrupt hospital functions."

Jeran notes that one clause of HIPAA protects PACU staff because it acknowledges the possibility—and permissibility—of incidental disclosures of patient's "protected health information" to other patients or visitors during the course of treatment.

Educate patients and families

Patients and families should receive written materials describing activities in the PACU, timing of visits, and reasons why visitors may be asked to leave.

Memorial Sloan-Kettering distributes a Patient Information Fact Card in the waiting area. The card informs family members about the visitation procedure, tells them how to reach the PACU, and explains proper behavior in the PACU.

Patients at Brigham and Women's Hospital receive a packet before hospital admission that includes information on PACU visitation. This brochure is also available in the family waiting area. (The brochure is available at

Setting up a PACU visitation program

Establish a policy

- Adopt a position statement.
- Educate staff to achieve buy-in.

Set guidelines for visitation

- Who and how many can visit?
- When can they visit?
- How long can they stay?
- Will they be escorted?
- Will they help with patient care?

Ensure privacy of patients

- Establish rules for when visitors must leave.
- Comply with regulations (eg, HIPAA).

Educate patients and families

- Develop patient-information materials.
- Distribute brochures in family waiting area.

Test the program

- Survey families and patients.
- Perform quality control.

www.ormanager.com. Look under the OR Manager's Tool Box.)

Education of families should also take place in the PACU, Jeran says. Family members should be cautioned not to overstimulate the patient with excess talk and should be coached in how to care for the patient if the hospital's policy permits family participation in care.

Test the program

Feedback is necessary to evaluate a PACU visitation program.

At Brigham and Women's Hospital, a survey was used to determine whether families received useful information about visiting the PACU, were escorted to the unit, were able to speak to the PACU nurse, and found the visit helpful.

"Responses from families were overwhelmingly positive," Sullivan notes.

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Postanesthesia care

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Many families added comments expressing their satisfaction and appreciation to the hospital.

Sullivan would like to streamline the visitation procedure by having PACU nurses, rather than family liaison staff, initiate telephone calls for the visits. The family liaison staff sometimes makes multiple calls before a visit is possible. Initiating the call from the PACU would save time because the call would be placed only when visitors are permitted.

Quality-control studies were performed at Memorial Sloan-Kettering to determine whether the patient's family received a call from the PACU within 90 minutes of PACU admission. Rates were generally higher than 80%. Occasionally, families were not in the waiting area to receive the call, the family went to the PACU without waiting for a call, or the call was delayed by an emergency. This information allowed improvements in the procedure.

Negative consequences of visitation are negligible compared with the benefits, nurses say. The use of volunteer escorts can be problematic if there are not enough when needed. Rarely, a family member faints in the PACU.

Summary

Hospitals can develop or improve a PACU visitation program by establishing a policy, setting rules for visitation, ensuring patient privacy, educating staff and families, and performing quality control. Resistance from nursing staff is fairly easy to overcome, and visitation in the PACU for all patients seems likely to become standard practice.

Sullivan warns that not allowing visitation may be detrimental: "If you don't have a visitor program, you'll probably have people somehow figuring out what your phone number is, lurking outside the door, and trying to see if they can get in." She is confident that "if you have a good program that meets the needs of the patient, the family, and the nurse, it will be successful."

PACU visitation is integral to patient care and consistent with regulations such as those of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO).

Jeran explains: "As nurses, we're taught to believe in family-centered care. That's the way nursing programs are set up; that's what JCAHO wants. I think it's unacceptable to have an area [in the hospital] where you don't reunite the family, even if it's just for a few minutes.

She adds, "Anything that's going to make the patient and family more comfortable as they go through a very stressful period needs to be instituted, and we just have to figure out a way to make it work for everyone." ♦

—Laura Ninger

Laura Ninger is a freelance medical writer.

OR Manager thanks Joan Kline, RN, Lucile Packard Children's Hospital, Stanford University Medical Center, Palo Alto, Calif, for her assistance in developing this article.

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ASpan issues new guideline on pain and comfort

The American Society of PeriAnesthesia Nurses (ASpan) has issued a new Pain and Comfort Guideline to help nurses assess and plan for patients' pain relief before and after surgery. The guideline outlines elements for assessment, interventions, and expected outcomes for pre- and postanesthesia care.

ASpan decided to develop the guideline after finding that, despite the emphasis on pain management by the Joint Commission on Accreditation of Healthcare Organizations, nurses felt their knowledge and practice of pain management wasn't all it could be.

In a survey at ASpan's annual conference a couple of years ago, respondents said they identified the patient's goal for postoperative pain relief only 21% of the time. The rate of assessment was highest in the preadmission testing area, but the range was wide from 40% to 75%. The respondents estimated that 66% of patients would rate their pain as moderate pain on discharge from the Phase I postanesthesia care unit (PACU).

"It's not where we wanted to be," says Linda Wilson, RN, PhD, CAPN, CAPA, assistant professor of nursing at Drexel University in Philadelphia.

ASpan developed the guideline to help support nurses in improving pain assessment and management.

"The guideline is designed to provide information for nurses from novices to those with a lot of experience," she says.

"It's comprehensive and is intended to give nurses an overall idea of what is needed in each phase of care."

A resource manual to accompany the guideline is scheduled for publication early in 2004. The manual will provide a variety of materials, including patients' rights for pain management, competencies, pain and comfort scales, documentation issues, information on integrative therapies, and performance improvement plans. There also will be information for specific age groups and to meet cultural needs.

ASpan is seeking endorsement for the guideline from the American Society of Anesthesiologists. ♦

The guideline is at www.aspan.org

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Ambulatory Surgery

Should surgeons be able to hand-pick staff?

I thought I would share some of the more interesting e-mails I've received recently from readers.

Q. Our hospital just formed a joint venture with our surgeons, and now the surgeons are hand picking the staff who will work in the new center. How can they get away with that? Why is the hospital not standing up to the surgeons and telling them which staff will work at the new center?

A. That's a good question and one that frequently comes up. The fact is that your hospital cannot call the shots for this new company it formed with the surgeons. It is a new company that your hospital has a financial interest in only.

Very frequently when these joint ventures occur, the surgeons who invest in the new surgery center "cherry pick" the staff of the hospital to cull out the ones they perceive to be the best. The surgeons typically look for staff members who will enhance their new surgery center in the following areas: Pleasing personality, competence, strong work ethic, demonstrated willingness to go the extra mile (ie, not a clock watcher), and those who get along well with the rest of the staff. The selection process often is, admittedly, a popularity contest. Some great staff



often get passed over, but that is the reality of the situation.

Often in these arrangements, the partnership between the hospital and the surgeons allows for "significant clinical issues" (including staffing) to be determined by the surgeon partners of the new entity.

Q. I am an operating room nurse in a small hospital and consider myself to be an excellent and efficient RN. As a result of my efficiency, my room almost always breaks before the other rooms. Then we get stuck with another case moved from a room where the staff is slower. Then their room finishes before ours, and they get to sit around until it is time to leave.

I've discussed this with my manager, but she just tells us (my room crew) there is nothing she can do. Isn't there some incentive that can keep my crew motivated?

A. Actually, there is. It is a simple concept that encourages motivation among staff. I suggest that the manager do a test to allow the staff of the room that completes its cases first to go home (with pay) after their room breaks. I have seen managers try this, and it can work.

Q. We have a new vice president at our hospital, and he is trying to cut back our staffing by saying our ORs are not operating at 100% utilization. He recently did an analysis of OR utilization and found we were using our operating rooms 92% of the time. He wants to cut our staffing by 15% until we get up to 100%. What do you suggest?

A. Your new VP obviously doesn't understand the OR. Anyone who understands how an operating room works should realize that once utilization goes above about 78%, you lose flexibility. You do not have enough open time to flip-flop rooms (ie, allow a surgeon to follow himself in a second room to save him from having downtime between cases) and move cases around to better serve patients, physicians, and the demands of the schedule. Also, any OR department's schedule inevitably has gaps—a case is cancelled because a patient develops a last-minute complication, a surgeon is delayed by an emergency, and so on.

You also need to know how utilization is defined in your facility. Utilization is generally calculated by dividing the number of hours the ORs are available for surgery by the case time (patient-in to patient-out time). A 1999 study by OR Benchmarks found the median utilization for hospital ORs was 73%, not including turnover time between cases. Interestingly, utilization in ambulatory surgery centers was lower, at 55%. Utilization in some ASCs can be unbalanced. A center may be very busy on Thursday and Friday, for

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GAO report fills in picture of niche hospitals

While Congress wrestled with the issue of specialty hospitals in October, the General Accounting Office (GAO) issued a new report that gives more information on specialty hospitals.

These niche hospitals, which focus on cardiac, orthopedic, or other surgery or women's health, are controversial. Advocates say they improve quality and reduce costs. Critics charge they siphon off the most profitable procedures, leaving general hospitals with fewer well-paying procedures to help support emergency care and other community services.

Congress is debating whether to approve legislation that would make it more difficult for physicians to invest in hospitals in which they have an ownership interest. The concern is that allowing the referrals gives physicians more of an incentive to refer to hospitals where they are part owners and can share in the profits.

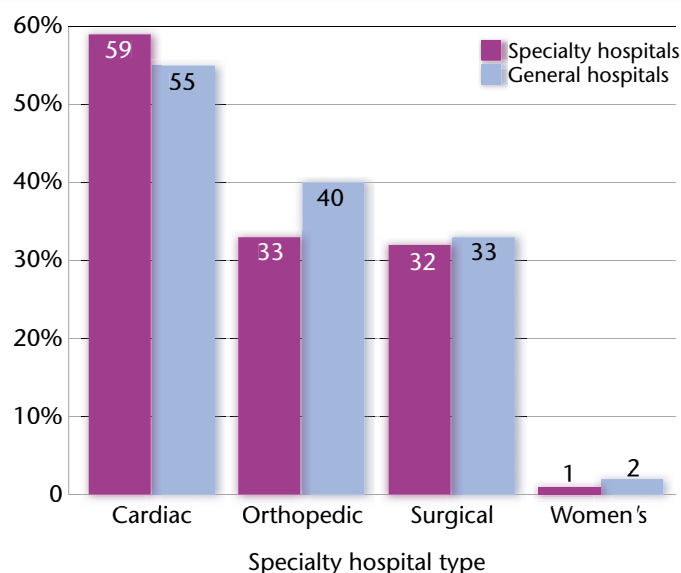
The GAO found about two-thirds of specialty hospitals are concentrated in seven states: Arizona, California, Kansas, Louisiana, Oklahoma, South Dakota, and Texas. All of those under development are in states where state approval is not needed to build hospitals or add new beds.

More than 90% of specialty hospitals opened since 1990 are for-profit. In all, 70% had some physician ownership, with physicians owning on average a little over 50%. The majority of physicians working in specialty hospitals—73%—had no ownership interest, however.

Among other findings:

- Overall, 45% of specialty hospitals had emergency departments, compared with 92% of general hospitals. Specialty hospitals saw fewer emergency patients per bed.
- Specialty hospitals tended to treat a lower proportion of Medicaid patients with the same conditions. For example, 3% of cardiac patients in cardiac hospitals were on Medicaid compared with 6% of cardiac patients at general hospitals. Results for Medicare patients were mixed.

Percentage of Medicare patients



Source: General Accounting Office.

- Total facility margins averaged 6.4% for specialty hospitals and 3.1% for general hospitals.

A skewed system

Skewed Medicare payments are one issue underlying the controversy. Medicare's 20-year-old hospital payment system is only weakly tied to the actual costs of providing care. As a result, the system pays too much for some types of care, like cardiac surgery, but too little for others, such as pneumonia and renal failure, the Oct 26 *New York Times* reports. One analyst estimates the profit margin for surgery is about 15% for some hospitals, compared to only 2% for gastrointestinal care.

The distorted payment system influences behavior—hospitals game the system to attract more of the high-paying cases and fewer of the low-paying ones. Specialty hospitals carve out niches that capture the best-reimbursed procedures.

Reforming Medicare payments would seem to be the answer, but that's a complicated project, and no one expects it to happen anytime soon. ♦

The GAO report is at www.gao.gov. Search for report number GAO-04-167.

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example, but use only 50% of its time on Monday.

Patients may want to have their surgery late in the week so they have the weekend to recover. Centers may also need to accommodate their high-volume surgeons who want to schedule their cases only on certain days of the week.

(For information on the study, see the August 2000 *OR Manager*. For a discussion of OR utilization, go to www.ormanager.com. Look under Favorite Articles for the article titled: Is 80% to 85% utilization a reasonable target for ORs?)

Your goal should be between 75% and 78%. I suggest that you make a copy of this column and put it on your vice president's desk. ♦

—Stephen W. Earnhart

Stephen W. Earnhart is president and CEO of Earnhart & Associates, Inc., Dallas. He can be reached at searnhart@earnhart.com

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At a Glance

Deaths linked to surgical staplers

A Food and Drug Administration (FDA) review has linked 112 deaths and 2,180 injuries to surgical staplers, according to the Nov 8 *Boston Globe*. Earlier, the *Globe* reported that doctors believed the failure of a staple line to hold might have been a factor in the death of a woman after laparoscopic gastric bypass at Brigham and Women's Hospital (see p 12).

An FDA committee formed in 2001 has been reviewing some 20,000 reports of problems with staplers from 1992 to mid-2001 and about 1,000 a year since, according to the *Globe*. More than 3,800 problems, including several deaths, were linked to the Endo GIA stapler used in the Boston case.

The FDA is planning to launch a web site early next year to alert surgeons and ask for more reporting, the *Globe* said.

A spokesman for Tyco's U S Surgical unit told the *Globe* that "when used in accordance with its instructions for use, every U S Surgical product is safe and efficacious."

—www.boston.com. Enter search term surgical staplers." Articles from the archives are \$2.95.

JCAHO's toughest standards

Standards of the Joint Commission on Accreditation of Healthcare Organizations that hospitals had the toughest time meeting in the first half of 2003 were:

- HR.5: Assessing each staff member's ability to meet performance expectations stated in the job description (18% noncompliance)
- PE.1.8: Completing and recording in

the patient's record before surgery the patient's physical examination and medical history, any diagnostic tests, and a preoperative diagnosis (13% noncompliance)

- TX.3.5: Completing the patient's history and physical examination, nursing assessment, and other screening assessments within 24 hours of admission as an inpatient (10% noncompliance).

The top three compliance issues for ambulatory care organizations were:

- HR.7.1: Applying credentialing criteria uniformly for licensed independent practitioners (21% noncompliance)
- PE.1.4: Assessing pain in all patients (15% noncompliance)
- PI.4.1: Using appropriate techniques to analyze and display data (12% noncompliance).

The complete list of compliance issues is in the November 2003 *Joint Commission Perspectives*, a subscription newsletter.

—www.jcrinc.com

Appropriate antibiotic use could save \$1 billion

A 250-bed hospital could save more than \$100,000 annually and hospitals nationally could save more than \$1 billion and reduce patient complications by curbing unnecessary antibiotic use, according to research presented at the Infectious Diseases Society of America meeting in San Diego in October.

The study, sponsored by VHA Inc, measured use of three widely used antibiotics—levofloxacin, ceftriaxone, and vancomycin. The focus was on patients with renal failure, urinary tract

infections, or who received prophylactic antibiotics for postoperative infections.

The researchers found 24% to 68% of the patients were overtreated or unnecessarily treated based on clinical guidelines for their conditions.

—www.vha.com

Control of blood sugar reduces complications after cardiac surgery

Controlling blood glucose levels with insulin in diabetics and nondiabetics reduces complications after cardiac surgery, researchers reported at the American Society of Anesthesiologists annual meeting in San Francisco in October.

Researchers investigated ways to reduce complications such as irregular heart rhythm, low blood pressure, and reduced cardiac pumping, which can keep patients in the ICU and hospital longer and increase costs.

Blood glucose levels were studied because they are linked to biochemical abnormalities that affect electrical stability of the heart, cardiac function, and blood pressure.

The researchers found careful regulation of blood glucose within a range between 80 and 120 mg/dL significantly reduced the incidence of atrial fibrillation and was associated with less need to administer drugs to maintain cardiac function and blood pressure. Increased blood glucose levels are related to the stress induced by cardiac surgery.

—www.asahq.org



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