Emergency departments are overcrowded. Ambulances are going on diversion. ICU beds are overflowing. Surgery is delayed.

Problems like these are stressing hospitals across the country.

What's the answer? Expand the ED? Add more ORs and ICU beds? Hire more staff?

Perhaps. But there's another place to look—the elective surgical schedule.

The variability of the elective schedule puts more strain on the system than the random cases that arrive through the emergency room.

That's the surprising finding of new research. The finding is leading some hospitals to take a new look at how they schedule surgery and manage the flow of patients throughout their facilities.

Smoothing the elective surgical schedule can avoid peaks and valleys that stress a hospital that is near capacity.

Say, for example, the cardiac surgeons have block times on Wednesday and Thursday. When those patients come out of surgery, they go to the ICU.

Soon those beds are full. There is no more room for patients who come in as emergencies, and the ED is placed on diversion. If the demand for ICU beds is high enough, some surgical patients may need to be held in the postanesthesia care unit.

Evening out the surgery schedule can ease these capacity crunches. This can actually benefit the surgeons by allow-
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A team briefing before surgery has helped avoid adverse events and reduce nurse turnover. Learn about the briefings and how they were introduced.

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Nursing education and staffing levels have a direct impact on patient safety.

Is there a connection between nursing education and patient outcomes? Nurses have asked that question for years.

Now there is an answer—yes, it does.

A major study led by Linda Aiken published in the Sept 24 JAMA finds surgical patients had a higher survival rate in Pennsylvania hospitals that employ a higher proportion of nurses with a bachelor's degree or higher. (See article on p 5.)

The findings have major implications for two items at the top of every hospital administrator's agenda—patient safety and the nursing shortage.

With this study, plus earlier findings, it now seems clear that nursing education and staffing levels have a direct impact on patient safety—fewer patients die when education and staffing levels are higher.

At the same time, administrators face a nursing shortage that is expected to worsen.

The big question is how hospitals will reconcile these two competing priorities.

Not surprisingly, community college advocates have taken issue with the study, but the fact that it was published in a major peer-reviewed journal carries considerable weight.

In conflict
The nursing profession has been in conflict about entry-level education for decades.

Major nursing associations took stands favoring the bachelor's degree for entry, starting in the 1960s. The Association of periOperative Registered Nurses (AORN) adopted its first statement favoring the 4-year degree in 1979.

But the statements have had little impact on how nurses are prepared. Today, decades later, 60% of RNs start their careers with an associate degree, while only 36% start out with a baccalaureate.

Nursing hasn't backed its position statements with more decisive action, such as requiring a bachelor's for specialty certification. Nor have boards of nursing acted to require a 4-year degree for RN licensure.

Other economic and social forces also are in play. There is little economic incentive to seek a bachelor's instead of an AD to enter nursing. In most facilities, nurses are recruited just as aggressively for staff positions regardless of their education, though nationally, on average, BSN grads earn somewhat more than AD grads.

Associate degrees offer a realistic and affordable path into nursing for many students. The AD has been a route for mid-career people to enter the profession and an important way for nursing to improve its diversity.

For many students, a 4-year degree is increasingly out of reach. Public universities raised their tuitions by 10% this year alone.

Some in nursing have proposed creating different levels of roles and pay for AD- and baccalaureate-prepared nurses, but there is resistance from AD advocates and, at least until now, little incentive to do so for hospital administrators.

For too long, the debate over nursing education has been without major research to guide it. Now there is data to help guide outcomes, but tough questions remain:

• In a time of shortage, how can 4-year schools prepare enough nurses to raise the proportion of BSN grads in the hospital workforce?
• Will the push to improve the quality and safety of patient care help counterbalance the economic incentives to hire nurses regardless of education level? Will hospitals seek to distinguish themselves by hiring more BSN nurses?
• Will insurers begin selecting hospitals on the basis of the percentage of bachelor's-prepared RNs?
• Will this study provide the impetus for hospitals to introduce more models that differentiate roles and pay levels for AD and BSN nurses?

The new study helps to answer one big question, but it raises many more.

—Pat Patterson
Please see the ad for DUPONT in the OR Manager print version.
Better outcomes with more BSN nurses

Hospitals with a higher proportion of nurses educated at the bachelor’s degree level or higher have lower rates of death for surgical patients, according to a new study by Linda Aiken and her colleagues from the University of Pennsylvania.

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

“The findings suggest that the conventional wisdom that nurses’ experience is more important than their educational preparation may be incorrect,” the authors say. The study was published in the Sept 24 JAMA; 290:1617-1623 (www.jama.com)

The results also suggest that making an effort to recruit and retain baccalaureate-prepared nurses for bedside care and investing in further nursing education could lead to substantial improvements in the quality of care, the authors write.

The researchers examined the association between nurses’ education and two risk-adjusted patient outcomes—deaths within 30 days of hospital admission and failure to rescue (deaths within 30 days of admission among patients with serious complications).

Study raises policy issues

After adjusting the data for a number of factors, including hospital size, teaching status, and technology level as well as nurse staffing, experience, and whether the patient’s surgeon was board certified, the researchers found that an increase in the proportion of nurses holding a bachelor’s degree was associated with a 5% decrease in both outcomes—the likelihood of patients dying within 30 days of entering the hospital and the odds of patients dying from serious complications after surgery.

All else being equal, they said, patients’ 30-day mortality and failure to rescue would be 19% lower in hospitals where 60% of nurses had BSNs or higher than in hospitals where only 20% of nurses did.

Nurses’ experience was not found to be a significant predictor of mortality or failure to rescue in the full models.

Aiken and her group also published an earlier study linking nurse staffing levels with patient outcomes. They say this new study found nursing education had an impact on outcomes that was independent of staffing levels. But staffing and higher education could also work together to improve outcomes. For example, in their sample, they estimated that if 60% of nurses had BSNs and the patient-to-nurse ratio was 4:1, about 700 fewer patients out of the 200,000 would have died than actually did.

The study was conducted by analyzing outcomes data for more than 200,000 patients having general, orthopedic, and vascular surgery in 168 adult acute-care hospitals in Pennsylvania during 1998 and 1999. The authors also surveyed more than 10,000 nurses in Pennsylvania. They then examined the association between nurses’ educational attainment and the two outcomes measures.

The study did not analyze outcomes by specialty, such as perioperative nursing.

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Day care was critical to the staff’s well-being.

Care for a large number of people. The hospital also had to provide shelter for family members of patients who had to stay in-house.

Riverside’s on-site day care center stayed open during the entire storm for children of hospital staff, not only for those who normally use day care. That continued during the week after the hurricane because the schools were closed.

Operating without power

Children’s Hospital lost power around 7 pm Thursday night. The emergency power did not support all of the lighting, and only certain ORs, such as the open-heart room, had power.

In their planning, OR staff made sure all critical equipment was plugged into red emergency outlets rather than the usual white outlets. When the power goes off, any equipment plugged into the red outlets will immediately be transferred to generator power.

From the time the OR was placed on a restricted schedule until the all-clear, eight cases were performed, including incarcerated hernias, gastrectomies, and foreign body removals.

The hospital did not sustain major damage or flooding, despite being only half a mile from the water, probably because it was not high tide when Isabel hit.

Riverside lost power at 10 am Thursday, and did not get it back until 5 pm on Friday. Four emergency procedures were performed on Friday, including a coronary artery bypass, a cholecystectomy, and two appendectomies. The biggest problem with generator power is that it does not provide air conditioning.

deaths. The OR staff was not able to get in that morning. Only two staff members were not able to get to work.

Be aware of staff’s needs

The most important thing for a manager is to be aware of the staff’s feelings and needs, Cold says.

“Talk to them, tell them what is going on, and educate those who will be on restricted call,” she advises. “Tell them they are going to be sleeping in the hospital, and you don’t know when you can let them go.”

MacAdams adds, “When you have to tell them you don’t know what the situation will be, it is nerve wracking. If you can get information to your staff quickly, it makes them more comfortable.”

On Wednesday afternoon, Cold met with all of the staff, and those that would be on restricted call. She told the call staff to go home, make sure everything was taken care of, and bring their cell phones back with them in case the phones went out. The phones did go out, but some cell phones also went down.

At Riverside, the restricted staff stayed until 5 am Friday. The staff who stayed home were required to come in at 5 am to relieve those on call. Only two staff members were not able to get to work.

The Children’s Hospital day care program was kept open for children of staff members who had to stay in the hospital.

The day care program was critical to the well-being of staff who had to stay, says Cold. They knew the children were with them and in a safe place. Most spouses stayed home.

Restricted staff were not encouraged to bring other family members because the hospital does not have the facilities to rooms were terminally cleaned.

Because they knew they wouldn’t be able to use the ethylene oxide sterilizer during the storm, the staff gas sterilized items they thought they would need before the storm.

Blackout in New York

When the lights went out in New York City Aug 14, the surgical services staff at Downstate Medical Center in Brooklyn felt more secure and prepared because of emergency planning they have done since Sept 11, 2001, notes AnnyYeung, RN, MPA, CNOR, CNAA, assistant vice president of perioperative services and associate hospital director.

The hospital, with 12 ORs, was recently designated a 911 center and is next to one of New York’s major trauma centers, King’s County Hospital. Downstate had just participated in a regional drill responding to a hypothetical explosion at an outdoor concert.

Downstate’s emergency plan designates one commander to manage the hospital after a disaster has been called. The hospital’s Emergency Incident Command System allows the commander to assign roles to individuals regardless of their usual responsibilities. An organizational chart for the emergency command system designates four senior executives to the major emergency management roles, including a planning officer, communications officer, and so forth, each with a chain of command. If these executives are not available, the roles are assigned to others. Each department also has its own disaster plan.

When the blackout happened and the alert was declared, the executives went to the command center where they picked up a packet with emergency instructions and a red vest to wear. They were given walkie-talkies and emergency flashlights and went into action. Security personnel were deployed to guard the hospital and accompany any staff members who wanted to leave, a precaution against the looting that occurred in previous blackouts.

Following its disaster plan, the OR did a quick assessment of its area. Under the plan, any surgery in progress will finish, but no elective surgery will be started. The staff will be on standby to receive any trauma patients.
Emergency planning

Questions to ask facility engineers about the OR’s emergency power

What can you expect of your emergency power system in an emergency? Here are some questions to ask your facility engineers, suggests Dale Woodin, CHFM, deputy executive director of the American Society for Healthcare Engineering (ASHE), a unit of the American Hospital Association.

1. Exactly what services and equipment are on emergency power?

For example, how will the OR’s ventilation system be affected?

Hospitals are not required by national codes to have the OR’s ventilation system on emergency power. Some states require this. Often newer systems, regardless of code, are designed to provide ventilation to ORs to maintain positive pressure.

Even if the ventilation system is on emergency power, the cooling system often is not. This is because of the massive power required to operate the chillers that both cool and dehumidify the space.

ORs are required to have a certain amount of fresh outside air. In a power failure, if the ventilation system continues to operate, it will continue to pull in outside air. The air will be filtered but not cooled or dehumidified. On a hot, humid day, the system will draw warm, moist outside air into a space that is fairly cool and dry, causing condensation, typically on metal surfaces like ventilation ducts. The humidity can be uncomfortable, and the condensation can contaminate surgical supplies.

“It can feel like it’s raining in the OR,” Woodin says.

2. In some hospitals, specialized ORs, such as those for cardiac surgery and pediatrics, have their own supplemental cooling system, which may be on emergency power.

Find out if this system functions in an emergency and if so, for how long.

3. What reliability testing is done for emergency generators?

The Joint Commission on Accreditation of Healthcare Organizations requires emergency generators and their switching systems to be tested monthly at 30% of the generator rating. Two questions to ask about testing:

- Are the generators tested only for the minimum of 30 min or is extended testing done periodically? Extended tests of 3 to 4 hours should be done every 3 to 4 years to make sure generators can run for extended periods.

- Is the system adequately loaded when the tests are done to get a true picture of the load the generators can carry? Often, tests are run at night to avoid inconvenience. It’s better to run tests during the day to see if the generators can support day-time power needs.

4. How long will generators be able to operate in an extended power outage?

Typically, emergency generators are powered by diesel fuel. Each generator has a small fuel tank, called a “day tank,” which is resupplied from a bulk fuel tank, usually underground. There are no national standards for how much fuel hospitals must store. The common rule of thumb is enough fuel for 2 days, Woodin says. Local codes vary because of issues such as seismic requirements that affect the amount of fuel that can be stored on site.

During the recent power outage in the eastern U S and Canada, some hospitals had difficulty getting fuel because of traffic gridlock. ASHE is conducting a survey about how hospitals’ emergency power systems performed during recent power outages.

“Most hospitals are designed to minimum standards,” Woodin says. “We want to see if that is good enough, or if the codes and standards need to be reexamined.”

Results are expected later this fall.

To participate, go to www.ashe.org. Responses are due by Nov 15.

Because the blackout occurred after 4 pm, only a few cases were still in progress. Further surgery was put on hold. Some of the patients and families went home, while others stayed, and the hospital found a place for them.

Generator power was stronger in some areas than in others, so patients were consolidated to these areas. The hospital immediately contacted New York’s emergency management office, which sent a large generator as a backup. Once that was set up, the hospital had ample power.

In central supply, any packages that were in the sterilizers when the power went out were rewrapped and resterilized. All of the sterilizers went through a recertification process after power was restored.

When the lights went out, at first, everyone feared a terror attack. But at the hospital, there was a totally different attitude than on Sept 11.

“One on Sept 11, we were totally paralyzed. We didn’t know what to do. We were so scared,” says Yeung. This time, the staff felt better prepared.

“The drills have helped tremendously. We will never be totally prepared, but with a plan and practice, everyone knew exactly what his or her job was,” she says. ❖

—Judith M. Mathias, RN, MA

Latex allergy linked to gene, study shows

A study is the first to determine that latex allergy is related to a genetic alteration.

An understanding of the genetics of latex allergy would enable clinicians to identify people at risk before they become sensitized, notes Robert H. Brown, MD, of Johns Hopkins University, who reported on the research at the American Society of Anesthesiologists meeting in October in San Francisco.

An estimated 1% to 6% of the population is latex allergic. But many do not know they are allergic until they develop symptoms, or worse, anaphylaxis. About 1 million health care workers are at risk for life-threatening latex allergy.

Dr Brown and his group found that one gene related to control of the body’s immune response also is associated with latex allergy. ❖

—www.asahq.org
Managing patient flow

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ing them to get more cases done and thus increase their revenue.

The findings are from research by Eugene Litvak, PhD, director of the Program for the Management of Variability in Health Care Delivery and professor of health care and operations management at Boston University.

In June, Dr Litvak and his colleagues, led by Michael McManus, MD, MPH, of Harvard Medical School, published a study conducted at Children’s Hospital in Boston. They found that during the hospital’s busiest times, nearly 70% of all of the diversions from the ICU were associated with variability in the scheduled caseload—when elective surgery peaked, so did the number of patients diverted from the ICU.

A graph published with the study shows the results dramatically. The graph has two lines. One line is the elective surgical demand. The second line is the number of patients diverted. The two lines nearly match.

“The graph shows that whenever we have a peak in demand in scheduled admissions, we usually have a peak in diversions from the ICU, with all of the consequences that brings in terms of bed availability,” Dr Litvak told OR Manager.

Impact of the OR schedule

What does that have to do with the OR?

“You have two patient flows competing for hospital beds—ICU or patient floor beds,” Dr Litvak explained. “The first flow is the scheduled admissions. Most of them are surgical. The second flow is medical, usually patients admitted through the emergency department.

“So when you have a peak in elective surgical demand, all of a sudden, your resources are being consumed by those patients. You don’t have enough beds to accommodate the medical demand.”

Not only do these peaks strain capacity, they can be a danger to patients, he contends.

When surges occur, nurses are overworked, and that makes errors more likely. The Joint Commission on Accreditation of Healthcare Organizations says 24% of sentinel events reported as of March 2002 were related to staffing levels. Though the study was conducted at a children’s hospital, variability affects all hospitals that are operating near capacity, Dr Litvak said. In fact, this hospital was one of the best he and his group have observed. He applauded Children’s Hospital for allowing the data to be published and for being committed to addressing the cause of the problem.

“Some other hospitals we observed were worse,” he said.

A huge ripple effect

Why do these peaks happen?

It seems strange that scheduled admissions, such as elective surgery, have a bigger impact on variability than emergences.

“You would think that we call them ‘scheduled admissions’ because they are scheduled. In fact, they are more variable than random demand,” Dr Litvak said.

In surgery, the variability is created by the block schedule. Peaks in these scheduled cases cause a “huge ripple effect for the entire hospital,” he said.


Analyzing and managing variability

This is how an operating room could analyze its variability, according to researcher Eugene Litvak, PhD. He says these measures can significantly improve quality of care and reduce costs:

**Identify and classify**

ORs have three types of variability:

- **Clinical variability**: The mix of procedures they perform, such as general, orthopedic, and cardiac surgery
- **Flow variability**: Elective versus urgent/emergent cases
- **Professional variability**: Different levels of expertise among providers

**Measure**

Each type of variability can be measured as a deviation from an ideal, stable pattern. For example, variability in the flow of elective surgical procedures is measured as a deviation from the mean daily caseload.

**Eliminate artificial variability**

Eliminate artificial components of the variabilities.

Block schedules that are created without considering smooth and consistent use of OR time create artificial variability that can cause gaps in the schedule and overruns at the end of the day. This type of artificial variability is difficult, though necessary, to eliminate because surgeons’ lives are often organized around their OR schedules.

Some hospitals are beginning to modify their elective surgical scheduling, with a positive impact on the rest of the facility as well as on surgical input and revenue.

**Manage natural variability**

Manage the natural variability remaining in the system. Examples of natural variability are the mix of specialties and emergencies. Some approaches:

- Divide cases into flow groupings: elective and emergent/urgent.
  Manage each group separately, for example, by creating an open room for emergent/urgent cases.
- Divide cases by specialty and manage accordingly. One hospital divides surgical patients into subgroups such as orthopedics and gynecology to identify more effective ways to care for these patients postoperatively. Some gynecologic patients are being sent to the obstetrical unit, which has excess capacity, for example.


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Managing patient flow

Which departments ‘can ruin your party’?

Smoothing patient flow in the hospital involves the whole system, not any one part. “You need to realize how the parts of the system interact with each other and how patient flow can be affected by other departments—basically it’s, ‘Who can ruin your party,’” says Marilyn Rudolph, RN, MBA, vice president of performance improvement for VHA. She is a faculty member for the Institute for Healthcare Improvement’s breakthrough project on patient flow in acute care settings, which has about 60 teams participating.

“The majority of our teams came into this project hoping to improve their emergency department. But they quickly realized it’s not just an ED problem, so they have been pulling in team members from the OR and other departments,” she says.

Among lessons participants have learned in the first year of this ongoing collaborative:

- **Patient flow is a systemwide issue.** “You cannot solve these issues by concentrating on a single department such as the ER, the OR, the ICU, or the PACU,” she says.

- **Elective surgery can have a huge effect** on the ability to keep patient care moving within the system, as demonstrated in research by Eugene Litvak, PhD, of Boston University (related article). Thus, smoothing OR flow is “extremely important.”

- **Midnight census is not the best indicator of hospital activity.** “You can have some beds that are used two, possibly three times in a day as patients are admitted, discharged, and moved between units,” Rudolph says. “That leads to more within-day variability. We are learning you need to look at your data in a more realistic snapshot than just the midnight census.”

- **Coordinating discharges improves flow.** “We’ve learned we really need to set a key time for discharge, then coordinate all of the activity with that end-point in mind,” she says. That avoids the problem of running out of beds because patients aren’t being discharged until 4 pm, for example. Conversely, it can mean not having to scramble to discharge all patients by 10 am when beds aren’t needed until 3 pm.

- **Involve the postanesthesia care unit (PACU) in bed planning.** Several organizations are trying to link PACU discharges to admissions. Others are including the PACU in their “bed huddles” to plan for postoperative care of surgical patients.

- **In the OR, unscheduled add-on cases** are usually the ones that throw the system into chaos. Designating an open OR for unscheduled cases is one approach to evening out the flow. “We know that the OR is a money maker, and no one is turning away OR volume,” Rudolph says. “But we have to be smarter about how we bring that influx of patients into our organizations. We want to say yes, but we want to say yes in a more controlled way—by reducing variability.”

The Institute for Healthcare Improvement, Boston, is a nonprofit organization focused on improvement in health care. For information, visit www.ihi.org

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vary from day to day each week, but it can vary by more than 50% on the same day of the week. The authors call this “artificial” variability because it isn’t natural and random like emergency arrivals.

They propose that hospitals analyze the different kinds of variability in their systems and either eliminate them or manage them effectively. That, they argue, can make a big difference in the ability to manage all of the hospital more effectively.

Applying the research

Some hospitals are applying the research findings to smooth the flow of their surgical cases and make other changes.

The Institute for Healthcare Improvement, Boston (www.ihi.org), is using Dr Litvak’s research in its breakthrough project on optimizing patient flow in acute care hospitals (sidebar).

In smoothing surgical schedules, hospitals are using several approaches, which are described in accompanying articles:

- Designating one or more ORs for add-on cases to help even out the variability from unscheduled cases. St John’s Hospital in Springfield, Mo, has decreased waiting times for patients and even increased revenue for a group of surgeons using this method.

- Shifting the block schedule to even out artificial demand created by surgical case scheduling. Boston Medical Center is addressing this huge project and other patient flow issues under a $250,000 grant from the Robert Wood Johnson Foundation. The Variability Program at Boston University has developed software that can demonstrate the general principles of variability and patient flow. Modeling the effects on a particular hospital requires customizing the software.

“Every place is different regarding the flow of patients,” explains systems analyst and faculty member Abbot Cooper, and hospitals’ information systems typically don’t collect the type of information needed for modeling.

For more information, about Boston University’s Variability Program, go to http://management.bu.edu/research/hcmrc/mepi/index.asp

References


Hospital moves to smooth surgery schedule

Peaks and valleys in the elective surgical schedule cause surges in patient demand that reverberate through the hospital.

Boston Medical Center (BMC) is tackling block scheduling as a way to smooth the demand for surgery and ease stress on the rest of the system.

Shifting surgeon's schedules isn't a popular thing to do. But BMC's leaders are convinced the changes not only will mean fewer ambulance diversions but also enable their surgeons to do more cases.

BMC took on the project as one of ten organizations awarded grants in the Robert Wood Johnson Foundation's Urgent Matters initiative, which aims to eliminate emergency department overcrowding and raise awareness about the health care safety net (www.urgentmatters.org).

BMC was one of four grantees to receive larger $250,000 grants to conduct 1-year demonstration projects on specific methods to relieve ED overcrowding. BMC's project involves surgical scheduling. A 550-bed academic medical center and Level I trauma center in Boston's historic South End, BMC has 21 ORs in two buildings and performs about 60 cases each weekday.

Explaining why BMC decided to take on the project, John B. Chessare, MD, MPH, BMC's chief medical officer and senior vice president for medical affairs, says, "We are not alone in our dilemma of having ambulance diversions, ED overcrowding, and super-capacity in the hospital between 4 and 8 pm."

Many hospitals that plot their med-surg bed capacity or census by day of the week will see peaks and valleys.

"We saw a tremendous peak on Tuesday, Wednesday, and Thursday, and we had valleys on Monday and Friday. And guess what—our peak [ambulance diversion] day was Thursday."

"The reason we were going on diversion is we had the elective surgeries build up and take the excess beds," he notes. "Then the normal flow of admissions from the ED, which is fairly constant, couldn't go anywhere."

Light bulb went on

"The light bulb went on," when he learned of the work of Eugene Litvak, PhD, director of the Program for Management of Variability in Health Care Delivery at Boston University (related article). BMC invited the program to consult on the Urgent Matters Project.

BMC's task is to smooth out the "artificial variability" that occurs Monday through Friday because of the irregularity of the surgical schedule.

"The idea is that if we smooth down the peaks in inpatient demand, that will make it less likely that we will back up in the ED," Dr Chessare says.

Surgeons likely to benefit

What's been the reaction?

It's early yet. Dr Chessare says the chiefs of service who've seen Dr Litvak's modeling data have found it convincing and said, "Let's do it."

"I'm sure that when we actually get to moving the individual surgeons or services, there is going to be pushback."

A carrot for surgeons is research showing they can actually benefit from the changes. A smoother schedule means more cases will get done, and more revenue may be generated. Surgeons also will be more likely to get their add-on cases done and will be less likely to have their cases bumped.

How does he plan to introduce the idea?

"It's a leadership issue," Dr Chessare says. "We are going to say to people: 'We really sorry you are going to have to change your OR day. But for the good of the group and, indirectly, for your own work and the safety of your patients, we are going to do this.'"

He thinks such changes are easier in an academic medical center because physicians tend to think of themselves as part of the organization. He acknowledges it probably would be more difficult in a community hospital where physicians act more like independent contractors.

Part of the project entails building databases and other tools managers can use to get real-time information on demand, capacity, and flow and make adjustments as they go along. "That will be opposed to the way we have always done it, which is to generate a report at the end of the month showing how many cases we did and how many we bumped," he says.

He is trusting that the scientific approach will win the physicians over.

The hospital also has assured the surgeons that if they don't see the outcomes they expect—the same amount or more surgical cases and fewer ambulance diversion hours—it will go back to the previous schedule.

"We don't see how we possibly could do less surgery if we smooth the schedule. We expect to do more," Dr Chessare says. "Right now we are bumping cases on many Wednesdays and Thursdays. We believe if we smooth the schedule, those cases won't get bumped."

Evening out discharges

Another way BMC is addressing patient flow is to have physicians change their rounding habits to even out discharges through the day. Currently, most discharges don't happen until 4:30 pm because physicians' batch their discharge work in the afternoon.

"Our data shows that on a typical night we have 10% to 15% of our beds empty at midnight, but at 4 pm, we are at 108% to 109% capacity," Dr Chessare notes.

"This is because the patients aren't flowing out in a natural way when they are clinically ready. They are flowing out artificially according to work habits of the doctors and nurses. This creates artificial discharge peaks in the late afternoon."

Already, cardiothoracic surgeons have created more capacity for themselves by first doing rounds on their patients who are being discharged. Their average discharge time has shifted from 4 pm to 12 noon.

"That made it much easier for them to get an ICU bed because the bed could empty before the first case of the morning came out of the OR," he notes.

The hospital is committed to using a more scientific approach to management. "Otherwise, we are squandering a huge, very expensive community resource," Dr Chessare says. "We are saying, 'This makes good business sense, and it makes good sense for our patients.'"
Managing patient flow

Add-on room helps trauma center up case volume, shorten waits

A Level I trauma center in Missouri began setting aside one of its 22 ORs for add-on cases in November 2002.

Two months later, they found that although one room (4.5% of its ORs) had been taken out of the blocked schedule:

- Case volume increased by 5%.
- The number of patients waiting for ORs at 3 pm, 5 pm, 7 pm, and 11 pm decreased by 45%.
- Surgeons are not routinely working late in the evening to complete add-on cases.
- Surgeons in the group that relinquished their block time saw their revenue increase by 4.6% for that time period.

Setting aside the one room was controversial at the beginning. But the results have lent credibility to the approach, notes Christy Dempsey, RN, BSN, CNOR, director of perioperative services at St John’s Regional Health Center in Springfield, Mo. The ORs perform about 100 cases a day, with 15 to 20 add-ons.

She proposed the add-on room after attending the Institute for Healthcare Improvement’s breakthrough project on improving patient flow last year. At the meetings, she heard Eugene Litvak, PhD, of Boston University speak about his research on improving flow by reducing variability.

He advocates add-on rooms as a way of smoothing variability in the surgical caseload (related article).

“We were facing major space constraints, increasing volumes, and more physicians with no increase in space,” says Dempsey.

Before she even got home, she called one of the OR’s physician champions and asked for a meeting the next week. He agreed, and the plan was implemented not long after.

Because the ORs are fully blocked, there was no open time for an add-on room. Dempsey approached the general trauma surgeons, with whom she has good rapport. They were using a room that wasn’t fully utilized. She told them she would give them first claim on using the room but asked them not to schedule elective cases in it during a trial period. She also told them that on other days they worked, she would extend their block time into the evening. She noted that if they agreed, the research showed they were likely to do more cases and see their revenue increase.

“We did it as a trial. It has worked so well that in the block revision I am doing now, I have extended the room from 8 hours to 10 hours,” she says.

It would be a stretch to say the group’s revenue increased solely because of the add-on room. “But the fact is, their revenue went up at the same time we had an unscheduled room available for them to do their cases,” she says.

The add-on room is staffed like any other OR. If there is downtime, the staff helps in other ORs or the storeroom. “The staff likes it because they don’t have to stay over or get called back in,” she says.

“A savings overall”

Though add-on rooms used to be fairly common, Dempsey found little in the literature on the subject, and none of her networking colleagues were doing it.

“I think everybody is in the same place we were with the space constraints and the volume increases. There are also staffing issues—if they have a room, they may not be able to staff it,” she says.

The plan takes flexibility on everyone’s part. Surgeons must be willing to come over in the middle of the day when time is available. Everyone, including the administration, must understand that the room will never be fully utilized. But by adding flexibility, more cases will be done during the business part of the day. There are other benefits: Emergency patients will get into the OR more quickly. Fewer add-on cases will have to be done into the evening. And with fewer add-ons, nurses on patient units can better plan staffing for evenings and nights.

“It really is a savings to the hospital overall, even though it may mean that one OR isn’t fully utilized,” she says.

OR Benchmarks plans study of gastric bypass

With bariatric procedures growing annually, facilities are interested in measuring their costs. OR Benchmarks is conducting a special study of the laparoscopic gastric bypass procedure.

Some 80,000 bariatric procedures were performed last year, and the number is expected to climb to 120,000 this year. The number of people eligible for the procedure is expected to grow by 10% to 12% per year.

Insurance plans are often reluctant to pay for this procedure. Facilities that know their costs will be able to calculate their return on investment and will be in a stronger negotiating position with payers.

OR Benchmarks’s procedure studies include direct costs for supplies, anesthesia, and labor. Case times are included for the procedure as well as for prep, induction, and turnover times. Facilities’ costs will be compared with like facilities. Differences in costs are analyzed to point out opportunities for cost savings.

The fee to participate is $1,500. To register on-line, go to www.orbenchmarks.com or for more information, call Judy Dahle, RN, MS, director of OR Benchmarks, at 1/877/877-4031.

More RNs do not mean lower profits

Increased RN staffing does not significantly decrease hospital profits, though it boosts operating costs, a new study finds.

Because nursing personnel make up about 30% of a hospital’s budget, reducing nursing staff has been one way for financially strapped hospitals to improve their bottom line.

In a study supported by the Agency for Healthcare Research and Quality, researchers analyzed data on 422 hospitals in 11 states for 1990 to 1995.

They found that although a 1% increase in RN full-time equivalents (FTEs) increased operating expenses by about 0.25%, there was no statistically significant effect on profit margins.

It may be that hospitals with fewer RNs have higher turnover and use more overtime—costs that decline with more RNs. —McCue M et al. Journal of Health Care Finance. Summer 2003;29:54-76.

The shortage of anesthesiologists shows signs of easing. The number of residents in training has risen. But it will be several years before the labor supply is near where it needs to be. In the meantime, negotiations with anesthesia groups will continue to be tough.

The best advice is to understand the trends and start early to prepare for negotiations, say consultants who work with anesthesia groups regularly.

The shortage has been going on since the mid-1990s when the number of students entering anesthesia residencies dipped.

American graduates from anesthesia residency programs fell by 74% from 1995 to 2000, and the overall number declined by 49%, according to the American Society of Anesthesiologists. That trend has reversed, and recruitment is now up above the former peak in 1992. Compensation increases also are starting to level off.

But negotiations won’t ease for a while.

“It may take 2 years for the word to get out that the market isn’t roaring any more in terms of compensation,” says David A. Wofford, of Seattle-based ECG Management Consultants, who consults with hospitals and anesthesia groups.

Because they have been in short supply, anesthesiologists are driving tough bargains for compensation, including hospital stipends.

In the days before the shortage, an anesthesia group typically would agree to provide OR coverage and call in exchange for an exclusive contract with a hospital.

“Now with the shortage, we find prices have been bid up, and anesthesiologists are turning to hospitals for money,” notes Robert G. Rowland of ECG. Many also have been squeezed by poor reimbursement and are looking for additional revenue.

Advice for negotiations

Advice for making deliberations go more smoothly:

• Understand the trends in labor supply and compensation. Having the facts helps both hospital and physician negotiators to be more realistic.

Though anesthesiologists may be hearing about double-digit increases in pay from their colleagues, the trend has been volatile. Compensation over the past 3 years has increased from 1.2% to 14.5%, according to the Medical Group Management Association (www.mgma.com). Last year’s increase was 8.2% (see graph on page 14).

Among specialists, anesthesiologists are in the middle of the pack, ranking seventh among 15 specialties in a recent MGMA survey.

Nurse anesthetists have been able to bid their average pay up above $100,000 because of a shortage and increasing demand for their services (sidebar).

Demand for anesthesia providers is growing because of rising surgical volumes and the proliferation of surgery sites, including surgery centers and office-based ORs.

Nurse anesthetists’ services are in demand because Medicare has changed its rules to make physician supervision a state option, and some states have elected to allow nurse anesthetists to practice without that supervision.

• Don’t let negotiations sneak up on you. “A lot of times, the anesthesia group will come with demands the hospital didn’t anticipate,” Wofford says. “Our advice is to communicate well in advance of negotiations with your physicians and understand their expectations. Don’t get in a situation where you are too tight on time.”

• Understand where the anesthesia group is coming from. Know what the costs are in your area for supporting anesthesiologists and an anesthesia practice. How many cases does the average anesthesia provider need to perform in a day to support his or her salary and benefits?

Be aware of reimbursement pressures, particularly if the practice has a high percentage of Medicare patients.

“Medicare payment for anesthesia is abysmal, typically 30% to 50% of what they get from commercial payers,” says Rowland.

The payer mix also influences a hospital’s bargaining power. Hospitals in urban and rural areas with higher percentages of Medicare, Medicaid, and uninsured patients may have a more difficult time recruiting and retaining anesthesia providers than suburban hospitals and ambulatory surgery centers with more commercially insured patients.

• Be reasonable and objective in setting performance expectations. “One of the hot buttons always is service and performance standards,” comments Wofford.

“The hospital will say to an anesthesia group, ‘Maybe we will give you a stipend, but we are going to say you have to show up 15 minutes before the start of a case, you can’t be late if you’re on call, and so forth.’”

The requirements can go on for pages and be perceived as patronizing by the anesthesiologists.

For their part, anesthesiologists argue the hospital is affecting their income by not seeing that OR time is used efficiently.

Franklin Dexter, MD, PhD, an anesthesiologist, researcher, and consultant at the University of Iowa, Iowa City, helped develop a method for calculating excess costs anesthesia groups may incur because of the way OR time is

CRNAs and the labor shortage

In 1990, the US Department of Health and Human Services (HHS) reported the nation was short almost 5,400 nurse anesthetists and 1,500 to 1,800 graduates were needed annually to meet the demand by 2010.

Where does the labor supply stand today?

• 1,300 to 1,700 students are graduating from CRNA programs each year, up from 900 to 1,000 in 2001.

• 45% of CRNAs are men, up from 42% in 2002. That compares with 5% of RNs in general.

• The average age of CRNAs is 48.

• By 2012, 64% of practicing CRNAs expect to retire.

“Inadequate staffing” is the leading concern voiced by CRNAs.


Continued on page 14
allocated and cases are scheduled. The
method is described in Anesthesia &
Analgesia. Dr Dexter also has a lecture
on the subject on his web site and offers
a CD-ROM (www.franklindexter.net/
Afternoon_Staffing.htm)
He’s found that just describing the
concepts can be enough to convince
hospitals of the need for a stipend.
Be skeptical
But he also thinks hospital adminis-
trators generally should be skeptical of
an anesthesia group’s argument that the
stipend should reflect their excess
costs because OR allocation and case
scheduling aren’t based on OR efficien-
cy. That argument should apply, he sug-
gests, only after anesthesia providers
have adjusted their staffing as much as
possible to the current schedule.

“I’ve encountered situations where
anesthesia groups have had a call and
staffing system in place for many
years,” Dr Dexter says. “The workload
has changed; for example, maybe the
ORs are running later in the day. But
the anesthesia group has not changed
its call and staffing system.”

It often turns out the reason for the
anesthesia group’s excess costs is both
because of OR allocation and case
scheduling issues and the anesthesia
group’s poor call/staffing system.

• Include anesthesia providers in the
planning. Consult them if you are
building new ORs, adding an ambu-
laratory surgery center, or planning a
pain management service. It’s not
unusual for a hospital to plan a new
facility and not think about anesthesia
coverage until 90 days before it
opens, which is too late. Anesthesia
providers need time to plan cover-

age. If you need to recruit, it could take at least 6 months.

In the past, hospitals didn’t pay
much attention to how anesthesia
groups work, Rowland observes.

“Now they are having to get up to
speed to strike good deals,” he says. “It
helps to have a basic understanding
about what life is like for the anesthesi-
ologist, not just what works for the
OR.”

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SARS fears may swamp
emergency rooms
The fear of the possible return of
severe acute respiratory syndrome
(SARS) is so great in the US that even if
the virus does not appear, it probably
will cause disruptions of emergency
departments this winter, the Oct 8
Washington Post reported.

The Centers for Disease Control and
Prevention (CDC) and other health offi-
cials say emergency departments could
be swamped.

“Whether the virus comes back this
winter or not, we will be dealing with
SARS,” said James Hughes, MD, of the
CDC. “When people start showing up
with respiratory diseases, physicians
will be thinking of SARS.”

The disease emerged in China last
November. Through July, when its
activity subsided, it had infected about
8,100 people, with 774 deaths world-
wide. There were 74 probable cases in
the US but no deaths.

“I can tell you we’re more prepared
than before,” Dr Hughes said, adding
that he thinks enough lessons have been
learned that the global community can
deal with SARS if it is handled appro-
priately.
—www.washingtonpost.com
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Residents’ work limits challenge staffing

Hospitals that rely on residents to assist in surgery face new demands imposed by the limits on residents’ duty hours that took effect July 1.

In some cases, the limits are providing opportunities for RN first assistants (RNFAs) and physician assistants (PAs). But organizations are struggling to pay for new positions and find enough qualified personnel.

Under the limits from the Accreditation Council for Graduate Medical Education (ACGME), residents are restricted to 80 duty hours a week, including in-house call, averaged over 4 weeks plus other rules. That compares to the 95 hours a week many residents have worked.

The limits are a response to concerns that shorter hospital stays, new technology, and financial cutbacks place more pressure on residents and jeopardize patient safety. Programs that don’t comply and correct deficiencies could lose their accreditation. Johns Hopkins has already been cited for violations associated with its internal-medicine residency program, according to the Wall Street Journal.

With more than 7,800 residency programs residents at 1,100 teaching hospitals across the country, the limits could have a big impact.

So far, hospitals have coped mainly by rearranging schedules, according to anecdotal reports the council has received. Some have added PAs and nurse practitioners, though ACGME does not collect data on this.

More demands, few resources

Teaching hospitals must figure out how to cover for duties residents have performed in surgery when little if any new funding is available. There are an estimated 15,000 surgical residents in the US in 1,060 surgical residency programs.

UT-Southwestern Medical School in Dallas, affiliated with 990-bed Parkland Memorial, a Level I trauma center that treats over 100,000 emergency patients a year, is finding the limits tough to accommodate, reports Robert V. Rege, MD, professor and chairman of surgery.

“We’ve had to reorganize surgical services, redo schedules, and institute systems to ensure continuity of care,” Dr Rege says.

He is concerned that resources are so stretched that patients’ access to care and eventually its quality will be affected—an outcome the resident limits are intended to avoid.

Though residents appreciate having some control over their work hours, he says they “are irate” when it interferes with their ability to participate in care that is educational.

Though UT has discussed using other types of assistants, he says that would not solve many of the problems.

“There is also a shortage of individuals trained to do this, and hospital and practice margins are not sufficient to support them,” he notes.

Faculty surgeons are working harder to give care at the expense of teaching, but adding faculty “is not a solution either,” he says. There are few resources to add faculty, and a shortage of general surgeons makes recruitment “impossible.” This situation is getting worse as surgeons retire or limit their practices. Trauma care especially is suffering because of financial problems and malpractice risks.

Supply and demand

A staffing agency that supplies assistants for surgery has seen an increase in requests for placements. But so far, compensation hasn’t been sufficient to attract them, comments Leo Blatz of Supplemental Health Care. Demand for physician extenders in general has been increasing because of the demands of technology and more complex care. Though the effect hasn’t been felt yet, he expects the demand to exceed supply, which will drive up the cost.

It’s too early to know whether more RNFAs will be hired, comments Michael J. Garufi, RN, CNOR, CRNFA, head of the Association of periOperative Registered Nurses (AORN) RNFA

Spotty reimbursement for RNFAs and PAs is an issue.

Studies on sleepy residents

• 41% of 145 residents cited fatigue as a cause of their most serious mistake. In nearly one third of these cases, the patient died as a result of the error.


• Staying awake for 24 hours impairs cognitive psychomotor performance to the same degree as having a high blood alcohol level.


• Surgical complication rates were 45% higher when residents had been on call the previous night.


Source: American Medical Student Association. Primer on Resident Work Hours. 4th ed. www.amsa.org

Specialty Assembly, who is employed by the cardiac surgery department at the Cleveland Clinic in Ohio. He expected to hear more when the assembly met in October.

PAs have been promoting themselves as a “creative solution” to reduced resident hours. The American Academy of Physician Assistants (AAPA) web site (www.aapa.org) tells how various hospitals have been using PAs.

A new study in the Archives of Surgery found PAs at one university hospital enabled surgical residents to reduce their workload by 15 hours a week within 6 months. Though the residents didn’t perceive that the PAs reduced the time they spent at the hospital, 60% did think the PAs reduced their stress and helped improve morale.

“Most definitely there are new openings for PAs and other mid-level practitioners,” John McNab, PA-C, a physician assistant and clinical transplant coordinator at Hartford Hospital, Hartford, Conn, told OR Manager.

RNFAs or PAs?

What type of practitioners hospitals use depends a lot on their culture and tradition.
The Cleveland Clinic has a long history of using RNFAQs, which “outnumber PAs five to one,” Garufi notes. About 70 RNFAQs are employed by the Clinic, with the cardiac surgery service alone having about 25.

Both residents and RNFAQs have a big role in open-heart surgery. Residents begin every case, and the attending surgeon does not take over until the patient is cannulated. RNFAQs harvest the graft conduit and assist with opening the chest and cannulation.

To fill the gap left by residents, the Cleveland Clinic has hired several “clinical associates,” board-certified cardiac physicians just out of residency, to assist during surgery. The RNFAQs’ role is to provide continuity, such as monitoring surgeons’ preferences.

In contrast, Hartford Hospital, a 800-bed teaching hospital, relies mostly on PAs.

At least three new PAs have been added in cardiothoracic surgery, McNab says. The transplant service has added one PA at the request of the Department of Surgery.

Resident limits have “affected us a lot in the transplant service,” he says. In a recent week, five kidney transplants and one liver transplant were performed in 3 days. Two residents quickly reached their 80-hour limits. PAs filled in by taking more call.

Reimbursement an issue

Reimbursement is spotty for hospitals that hire more RNFAQs and PAs.

Medicare does not pay for services of most RN first assistants, though some commercial payers do. Ten states mandate commercial third-party payment for RNFAQs. Some independent RNFAQs have negotiated contracts with payers.

AORN reports some progress with Medicare (www.aorn.org). The U S Senate’s Medicare bill passed in July includes a pilot study for reimbursement of certified RNFAQs. But the House bill does not include that amendment, so the final decision rested with a House-Senate conference committee meeting this fall.

PA services are reimbursed by Medicare as well as private payers. But Medicare doesn’t reimburse for PAs who first assist in teaching hospitals if the hospital has a residency program in the specialty for which the PA is asked to assist and a “qualified resident” is available. The criteria for “qualified” are somewhat vague, notes AAPA. Contact the academy for more information.

An opportunity for RNFAQs

Some surgical services directors see resident limits as a chance to expand opportunities for perioperative RNs.

Northwestern Memorial Hospital in Chicago, which has 35 ORs, has added four RNFAQ positions and has two more FTEs budgeted. The funding comes from a pool the hospital provided to address the resident limits.

“We saw this as an opportunity to get the RNFA program up and running and to provide more opportunities for our staff,” says Karen Anderson, RN, MSN, MBA, director of surgical services.

She asked for volunteers, who were funded to attend the local RNFA education program at St James Hospital in Chicago Heights. The program requires applicants to have:

- a bachelor’s degree in nursing
- 2 years of experience in scrubbing and circulating
- CNOR certification or eligibility
- basic life support (BLS) with advanced cardiac life support (ACLS) preferred
- letters of recommendation.

The RNFAQs currently assist in general surgery, urology, total joint replacement, and spine cases. Their responsibilities are intraoperative for now, though the job description gives latitude for them to perform perioperative patient assessment and patient teaching.

“This doesn’t compromise our regular staffing,” Anderson notes. “It is a separate cost center, and we charge for them as an additional person in the room.”

Alcohol hand rubs and fire safety

Many facilities are increasing use of alcohol-based hand rubs to comply with the Centers for Disease Control and Prevention’s (CDC) hand hygiene guidelines and the Joint Commission’s 2004 National Patient Safety Goal on nosocomial infections.

But many have run into problems installing hand-rub dispensers because of fire codes. National fire codes permit dispensers with alcohol-based rubs in patient rooms but not in egress (exit) corridors.

More than 20 organizations, including the American Hospital Association (AHA), CDC, fire safety experts, and others met in July to discuss the issue. They agreed to take steps to revise fire codes or gain exceptions.

At the meeting, the American Society for Healthcare Engineering (ASHE) presented results of a fire-modeling study showing dispensers could be safely installed in corridors as long as:

- the volume of the hand rub was 1.2 L or less
- the dispensers were not installed too closely to each other in the corridor
- facilities avoided installing the dispensers over carpeting until further testing is done.

Steps to take

In the meantime, AHA and ASHE issued an advisory suggesting that organizations consider placing alcohol-based hand-rub dispensers in patient rooms, suites, and other appropriate locations, but not in egress corridors or next to sinks. They advised working with local fire marshals to ensure installations are consistent with local fire codes.

In addition, the CDC offered the following safety tips:

- Store alcohol-based hand rubs away from flammable materials.
- Rub hands until the alcohol has evaporated and the hands are dry.
- Store alcohol-based hand rubs away from high temperatures or flames, in accord with CDC and National Fire Protection Association recommendations.
- Store supplies of alcohol-based hand rubs in cabinets or areas approved for flammable materials.

References

OR managers and directors gathered by San Diego’s sunny harbor for the Managing Today’s OR Suite conference Sept 17 to 19.

About 750 attended the two-day conference with trade show, now in its 16th year.

The audience responded warmly to keynoter Dan Clark, award-winning author and speaker.

“I’m always asked to talk about change,” Clark said. “Change from the outside is reactive—they’re cutting you back, and you still have to provide services.

“Change from the inside is proactive power,” he noted, challenging the audience to focus on “what is in the box”—their personal power and resources—before trying to “think out of the box.”

“All successful stretching occurs past the point of discomfort,” challenged Clark, whose address was sponsored by Kimberly-Clark Health Care.

Bring people together

Greta Sherman, a national recruitment and retention expert from JWT Specialized Communications Healthcare Group, returned for the second year to advise managers on one of their toughest issues—the nursing shortage.

Recruitment and retention is a lot like watching your weight, she suggested.

“It’s constant, there are no magic bullets, and a lot of things contribute to your success.” She reminded managers that 38% of newly hired nurses leave within the first year.

“If you can save 50% of those, think about the difference it would make,” she noted. Some of her tips:

- Conduct “incremental interviews” about 6 weeks after a new person has been on the job. Find out how they’re doing and what they need to be successful.
- Inventory your staff. Develop a file on each person so you know what is important to each one. Then support them and make them feel secure. Have them toe the line but respectfully.
- Learn to “speak the language of the generations.” Find out what is important to each age group, then bring the generations together so they can support each other. Maybe a young person needs Wednesday afternoon off for a kid’s soccer game, while an empty-nester wants to leave early on Friday for a long weekend on the boat. They might agree to cover for each other.
- Make mentoring of new employees an honor, not a chore. If there’s a bonus, consider splitting it between the new employee and the preceptor.
- Treat conflict as a friend, not a foe. Not every manager has this ability, but it can be taught. Unresolved conflict saps morale, increases stress, and drives people away. Communication is the key through listening, speaking clearly, and joint problem solving.
- Remember the little things. Find ways to recognize each person by offering tickets, parking privileges, and a simple thank you. “You have to work every day to bring people together. Know what is important to each person and enforce that,” Sherman emphasized.
National health insurance coming?

Paul Solman, business and economics correspondent for PBS’s NewsHour with Jim Lehrer, gave the audience a quick overview of economics in a special lecture and reception sponsored by Cardinal Health. His main messages:

- The promise of living longer is real. Those who have sufficient resources are going to be able to live a long time.
- Americans are going to spend more on “what you provide,” he told managers. Right now, 14 cents of every dollar is going for health care, and there’s no end in sight. That means plenty of job opportunities for health care workers.
- Pressure for national health insurance will build. “The market is showing we can’t provide what we want—health care for all,” Solman noted. “The poorer people are, the sicker they get, and vice versa. We’re on a downward spiral.”
- Some would argue the current system is unsustainable, he said. “National health insurance would expand the risk pool. I am guessing we will see it in my lifetime.”

Leaving them laughing

DeNene Cofield, RN, BSN, CNOR, sent the audience on its way laughing in her closing talk with a comical look at wisdom she’s gained as a surgical services director at Medical Center East in Birmingham, Ala. A highlight were three funny videos made by the OR staff and shown at a special breakfast during OR Nurse Week.

“The person having fun will always outperform the person who works just out of a sense of duty,” she said.

The 2004 Managing Today’s OR Suite is Oct 6 to 8 at the Chicago Hyatt Hotel.

Attendees gather at break time.
New code of ethics for device industry

You’re attending a conference. One of your vendors offers you tickets to a play-off game one night during the meeting. Is that ethical?

A company offers to pay your way to a national meeting. Is that appropriate?

You’re invited to attend a company training session at a luxury resort and bring your spouse. Is that OK?

A medical device industry trade group addresses these and other issues in an updated code of ethics. The voluntary code, which takes effect Jan 1, is intended to guide interactions between device companies and health care providers, including OR personnel.

The code is from Advamed, short for the Advanced Medical Technology Association, which has more than 1,000 members from the device industry. Advamed said it developed the code after discussions with the Health and Human Services Office of Inspector General this summer.

“There is a real sense that the environment is changing. There is a lot more attention to ethical issues, and the industry wanted to be a leader,” says Blair Childs, Advamed’s executive vice president. The American Medical Association and the Pharmaceutical Manufacturers Association have issued similar guidelines.

The code’s basic principle is that companies should encourage “ethical business practices” and “socially responsible conduct” and should not use any “unlawful inducement” to sell their products.

Here are highlights:

Product training and education

Companies have a responsibility to make education on their products available to health care professionals. In fact, the Food and Drug Administration requires such training. If out-of-town travel is required for training, the event should be held in a setting “conducive to the effective transmission of knowledge” (ie, not a luxury resort). If there is hands-on training, the instructors should have the proper qualifications and expertise. Hospitality and meals should be “modest in value” and in keeping with the educational focus.

Companies may pay for reasonable travel and lodging for health care professionals, but it is not appropriate for them to pay for spouses or other guests who do not have a professional interest in the content.

Educational conferences

Companies can support educational conferences for health professionals through educational grants, modest meals and hospitality, and paying honoraria and expenses for bona fide faculty.

Hospitality events should be “subordinate in time and function to the purpose of the conference.”

The conference sponsor, not the company, should control the selection of program content, faculty, educational methods, and materials.

Regarding scholarships, Childs says, “Companies can provide indirect subsidies, but they should not fund a person to go to a conference.” That is in line with the principle of not influencing individuals’ buying decisions. Likewise, companies should not hold receptions where only certain members are invited, he notes.

Sales and promotional meetings

Companies may hold meetings with health professionals to discuss their products, contracts, and terms. It’s appropriate for companies to pay for occasional modest meals and receptions conducive to the “exchange of information.”

Companies may also pay for “reasonable travel costs” for trips like plant tours. But it is not appropriate for them to pay for other guests (such as spouses), who do not have a professional interest in the information.

Consultants

Companies may pay health professionals “reasonable compensation” for consulting, such as conducting research, sitting on an advisory board, or providing training. These arrangements should be guided by a written agreement, compensation should be consistent with fair market value, the consulting should be for a legitimate purpose, and consultants should be selected on the basis of their qualifications and expertise.

Meeting venues should be appropriate, hospitality should be modest, and companies may pay reasonable expenses.

Gifts

Companies can provide health professionals with gifts but only if the gifts are modest, occasional, and benefit patients or serve a “genuine educational function.” Gifts should have a fair market value of less than $100. Gifts can include branded items of minimal value (like pads and pens). But they should not include items like golf balls or T-shirts that aren’t related to work or patient care. Gifts should not be in cash or cash equivalents (like gift certificates). And they should not include personal gifts like sports tickets.

“The whole point is not to influence the buying behavior of any individual,” says Childs.

The code says this section is not intended to address companies giving “appropriate” samples or products for evaluation.

Reimbursement advice

Companies may give health care professionals advice on their products that supports “accurate and responsible billing” of Medicare and other payers. This could include coding and billing for products and related procedures.

But it is inappropriate for companies to provide this kind of support for the purpose of “unlawfully inducing” health care professionals to buy their products.

Grants and charitable donations

Companies may provide support for charitable purposes, such as research, indigent care, or patient education. For example, they may donate items for doctors and nurses who do relief work abroad. But it is not appropriate for them to make donations for the purpose of “unlawfully inducing” a health professional to buy their products.

The Advamed code of ethics with frequently asked questions is at www.advamed.org.
In August, the U.S. Food and Drug Administration cleared for market a new sterilizer for use in health care. The new TSO3 Model-125L sterilizer uses ozone as the sterilant. What’s new about this sterilizer? What questions should you be asking yourself and the manufacturers to find out if it’s right for you?

Several investigators have been working for years to bring to market a sterilizer using this highly reactive but inexpensive chemical. The first successful effort comes from a Canadian company, TSO3 (www.tso3.com).

Ozone is the combination of three atoms of oxygen rather than the normal two atoms. We have heard a lot about it in recent years, good and bad, depending upon where the ozone is. The ozone layer in the Earth’s upper atmosphere protects us from the harmful UV rays of the sun. But ozone in the air we breathe down here at ground level is considered a pollutant.

**Worker safety issues**

As with all chemical sterilants, excessive exposure can be a worker health hazard. Ozone can be a respiratory irritant at low levels and can have more serious deleterious effects at very high levels (1 ppm or greater). The Occupational Safety and Health Administration has established exposure limits:

- ceiling level limit: no greater than 0.3 ppm average over any 15-minute period
- exposure limit: no greater than 0.1 ppm as an 8-hour time-weighted average.

One of the good things about ozone is that it is highly detectable by the human nose at levels of about 0.01 ppm, meaning you would know if there was too much ozone in the area long before it became a hazard.

This ozone sterilizer establishes negative pressure in the chamber during the cycle, meaning any inadvertent leaks would result in air entering the chamber and diluting the ozone before it escapes into the room.

Ozone for sterilization is produced in the sterilizer itself from the water, oxygen, and electricity. At the end of the cycle, the ozone is passed through a catalytic converter within the machine and reduced to oxygen and water vapor that is released to the room. Operationally, the sterilizer requires electricity, 1 to 2 cups of potable water that has passed through a demineralizing filter, and medical-grade oxygen gas that can be supplied either piped in or in cylinders (if the sterilizer location does not have medical gas hookups available).

The manufacturer recommends that the sterilizer be located in a room with at least 10 complete air exchanges per hour and an ambient room temperature between 68°F and 79°F. The sterilizer has a rectangular chamber with 4 cu ft of usable space, with a chamber width of 14.25 in and a depth of 32.5 in. It employs a car-and-carryage type loading system. The shelving configuration of the car allows for placement of items without directly stacking one upon another.

**Claims for lumens**

Label claims for lumens limit this process to single stainless steel lumens with an:

- inside diameter of 2 mm or larger and a length of 250 mm or shorter
- inside diameter of 3 mm or larger and a length of 470 mm or shorter
- inside diameter of 4 mm or larger and a length of 600 mm or shorter

The sterilization cycle is completed in approximately 4 hours. This is less than ethylene oxide (EO) but not as attractive, time-wise, as the competing technologies of gas plasma and liquid peracetic acid systems.

The manufacturer claims the per-cycle costs will compare very favorably with any other process on the market, although independent cost studies are still underway and could not be verified at this time.

To our delight, this manufacturer is simultaneously introducing both a chemical indicator and a self-contained biological indicator for this process. The chemical indicator is of the throughput type and should be used only to designate processed from unprocessed goods. The self-contained BI contains spores of *Geobacillus stearothermophilis* (formerly known as *Bacillus stearothermophilus*). They will fit in most of the

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small tabletop incubation units currently used for steam sterilization. The company also has introduced its own proprietary sterilization pouches that include a Tyvek layer as well as an anodized aluminum rigid reusable sterilization container system.

Is this technology right for you?
Answering that question depends upon a number of factors, some financial and some related to the types of instruments you are trying to sterilize. If, like most US facilities, you have already purchased at least one substitute for EO, you will need to do a comparison of future use-life costs for your current system and this new technology. Generally, sterilizers have a planned use life of 10 to 15 years, but the capital expense may be amortized over a shorter period. Decreased per-cycle cost may not be enough of an incentive if you just recently purchased another technology and still have to amortize a substantial amount of capital expense. However, if you have fully amortized the other sterilizer, the purported savings in operating expense with the ozone unit may be attractive if you have access to the needed capital.

In addition to financial considerations of the sterilizer itself, you should also think about the instrumentation. What is your planned replacement schedule for the types of devices that currently require low-temperature sterilization? For many of these devices, steam sterilizable models are now available. It may be more cost-effective to consider moving to these newer models rather than either continuing your current low-temperature sterilization or switching to ozone sterilization.

As with any new sterilization technology, the questions about what devices can be processed in this new unit need to be addressed on a device-by-device basis and will take some time. The ozone sterilizer has market clearance for not only the lumen sizes noted above but also as a general sterilizer intended for use with hinged metal instruments. You will have the arduous task of contacting device manufacturers to get their recommendations. Be sure to ask the number of cycles used for evaluating materials degradation. Then compare that number to the expected number of processes you would expect in normal use for the life of the device. Remember, this is an oxidative process that can accelerate degradation of some materials.

Final thoughts
The push for this company was to find an inexpensive, environmentally friendly, worker-safe replacement for EO with application in the Canadian market. They have succeeded in that. They realize, however, that they are not optimized to take the US market by storm. This is the first pass for this new technology. Remember how gas plasma cycles and claims have evolved over time? As the manufacturer does more testing, we would expect claims and indications for this new technology would also change and expand.

We think that this is a technology worth watching. Even though it may not seem to address any critical unmet needs for you right now, you should include this technology as a factor in long-term planning for sterilization processing.

—Marimargarert Reichert, RN, MA
Olmsted Falls, Ohio

—Janet K. Schultz, RN, MSN
Denver

Marimargarert Reichert and Janet K. Schultz are consultants well known for their expertise in sterilization and disinfection.

Reference


Do you have a topic you’d like to see covered in OR Manager? Have you completed a project you think would be of help to others? We’d be glad to consider your suggestions. Please e-mail Editor Pat Patterson at ppatterson@ormanager.com

High cost of patient injuries
A new study gives a clearer picture of the impact of postoperative infection and other types of patient injury.

The study, led by Chunliu Zhan, MD, PhD, of the Agency for Healthcare Research and Quality, focused on 18 types of injuries, many involving surgery, including postoperative infection. The researchers analyzed 7.5 million hospital discharge abstracts from 994 hospitals in 2000, or about 20% of the nonfederal acute-care hospitals in the US—a much larger database that in previous studies on errors.

Interestingly, the rate for foreign bodies left in during procedures was lower than previous estimates—about 1 in 10,000 compared with 1 in 1,000 to 1,500 in earlier reports.

Overall, the authors determined these 18 conditions cause about 33,000 deaths and cost about $9.3 billion annually.

These are some results for patients with surgery-related injuries compared with matched controls:

Postoperative sepsis
Death rate: 22% higher
Length of stay: 10.89 days longer
Charges: $58,000 higher
Rate: 11.25 per 1,000 discharges at risk

Postoperative wound dehiscence
Death rate: 9.6% higher
Length of stay: 9.42 days longer
Charges: $40,000 higher
Rate: 2.05 per 1,000 discharges at risk

Postoperative pulmonary embolism or deep vein thrombosis
Death rate: 6.56% higher
Length of stay: 5.36 days longer
Charges: $21,000 higher
Rate: 9.3 per 1,000 discharges at risk

Foreign body left during procedure
Death rate: 2.14% higher
Length of stay: 2.08 days longer
Charges: $13,000 higher
Rate: 0.09 per 1,000 discharges at risk

Complications of anesthesia
Death rate: 0.24% higher
Length of stay: 0.17 days longer
Charges: $1,600 higher
Rate: 0.71 per 1,000 discharges at risk

Postoperative nausea and vomiting (PONV) affect more than 25% of patients within a day after surgery, and the risk can reach 80%.

Patients are even more concerned about PONV than about postoperative pain. One study found patients would pay nearly $100 out of pocket to avoid it.

A single episode of vomiting prolongs recovery room stays by about 20 minutes. Children, too, are highly susceptible to postoperative vomiting (POV).

Nurse managers are well aware of patients’ discomfort and the increase in costs, but clinical management is not as clear.

Recently, an international group of experts on PONV published new guidelines for preventing and managing this condition. Tong Gan, MD, of the Department of Anesthesiology at Duke University Medical Center and lead author of the guidelines, states the reason for the panel meeting: “A lot of papers have been published on PONV, and sometimes there’s contradictory information.

“The aim of the panel was, based on the published evidence, to come up with coherent guidelines and recommendations in the management of PONV.”

Overview

The panel reviewed the literature through February 2002 to determine risk factors, preventive measures, and appropriate treatment. Studies were graded for their design and quality of the evidence. Pharmaceuticals were judged by the number needed to treat and number needed to harm.

The panel said decisions about prophylaxis or treatment must consider:

• the likelihood of PONV in the patient
• costs and adverse effects of PONV
• costs, efficacy, and adverse effects of antiemetics.

The guideline includes an algorithm for managing PONV (illustration).

Cost-effectiveness of prophylaxis

Although some institutions routinely provide prophylaxis, Dr Gan says, “It is not cost-effective to give prophylactic antiemetics to every single patient that comes to surgery.” Drugs such as ondansetron (Zofran) and dolasetron (Anzemet) are expensive, so they should be used only as appropriate.

Level of risk must be determined case by case. In general, prophylaxis is cost-effective among patients with moderate to high risk of PONV because costs of untreated PONV can be 100 times higher than the cost of prophylaxis.

Most low-risk patients do not need prophylaxis unless vomiting would cause medical complications, such as wound separation or esophageal rupture, or other conditions exist, such as a wired jaw. Limiting prophylaxis in low-risk patients avoids unnecessary side effects.

Judgments of risk will vary, the panel acknowledged. Thus, they did not try to specify what percentages of patients should be classified as low, moderate, or high risk or what actions are required at a specific percentage risk of PONV. “You cannot be dogmatic” about managing moderate-risk patients, Dr Gan asserted.

Risk factors for PONV

Risk factors for adults and children are outlined in the sidebars. One risk factor is duration of surgery—with every 30-min increase in surgery time, the risk of PONV rises by 60%.

The level of risk increases as the number of risk factors increases. Strategies for reducing PONV in moderate- to high-risk patients include:

• Addressing risk factors
• Considering regional anesthesia. General anesthesia increases the risk of PONV by 11 times compared with regional anesthesia.
• When general anesthesia is necessary, giving propofol for induction and maintenance, supplemental oxygen,
and ample hydration. To be avoided are nitrous oxide, volatile anesthetics, neostigmine, and opioids. Clinicians can consider substituting nonsteroidal anti-inflammatory drugs (NSAIDs) or COX-2 inhibitors such as Celebrex. A combination of strategies improves outcome.

**Preventing nausea and vomiting in adults**

Prophylactic antiemetics should be considered after risk factors are evaluated and reduced. Among the types of agents are:

- **5-HT3 antagonists.** Members of the class, such as ondansetron (Zofran), dolasetron (Anzemet), and granisetron (Kytril), have equivalent efficacy and safety for PONV prophylaxis and thus can be selected on the basis of treatment cost, the panel said. They are given at the end of surgery. As a class, they are more effective for vomiting than for nausea. Adverse effects may include headache, elevated liver enzymes, and constipation.

- **Dexamethasone (Decadron).** This drug is effective when given before anesthesia induction. Adverse effects of long-term corticosteroids have not been reported with a single dose for PONV prophylaxis.

- **Droperidol.** The panel agreed that droperidol is the most effective agent for PONV prophylaxis. It is usually given after completion of surgery. Unfortunately, the Food and Drug Administration (FDA) has issued a “black box” warning about droperidol based on 10 cases of morbidity and mortality from QT prolongation and torsades de pointes (a ventricular tachycardia that can be fatal). No cardiac events have been reported in peer-reviewed journals, however, with droperidol for PONV prophylaxis, and the panel questioned the FDA’s finding. Dr Gan emphasized that droperidol has been used for more than 30 years with relative safety. He believes the FDA may reevaluate the use of droperidol at lower doses because “there appears to be a dose-response relationship of droperidol and cardiac side effects.”

- **Other agents.** Older antiemetic agents are also available. Dimenhydrinate is comparable in efficacy to the 5-HT3 antagonists and droperidol. Transdermal scopolamine can be effective but has certain contraindications. Phenothiazines, such as promethazine (Phenergan) and prochlorperazine (Compazine), may cause sedation, dizziness, and dry mouth. Metoclopramide (Reglan) is not effective for PONV prophylaxis.

**Algorithm for management of postoperative nausea and vomiting (PONV)**

Evaluate risk of PONV in surgical patient

1. Low
2. Moderate
3. High

- **No prophylaxis unless there is risk of medical sequelae from vomiting**
- **Consider regional anesthesia**
  - Not indicated
  - If general anesthesia is used, reduce baseline risk factors and consider using nonpharmacologic therapies

**Patients at moderate risk**

- **Consider antiemetic prophylaxis with monotherapy (adults) or combination therapy (children and adults)**

**Patients at high risk**

- **Initiate combination therapy with 2 or 3 prophylactic agents from different classes**


**Alternative therapies.** Therapies including acupuncture, acupressure, transcutaneous electrical nerve stimulation, and hypnosis may be effective before surgery. But ginger root and cannabinoids have no clinical value in this setting.
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**Risk factors for adults**

Risk factors for postoperative nausea and vomiting in adults include:

**Patient-specific risk factors**
- Female sex
- Nonsmoking status
- History of PONV/motion sickness

**Anesthetic risk factors**
- Use of volatile anesthetics within 0 to 2 hours
- Nitrous oxide
- Use of intraoperative and postoperative opioids

**Surgical risk factors**
- Duration of surgery (each 30-min increase in duration increases PONV risk by 60%, so that a baseline risk of 10% is increased by 16% after 30 min)
- Type of surgery (laparoscopy, ear-nose-throat, neurosurgery, breast, strabismus, laparotomy, plastic surgery).


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**Combination therapy for prophylaxis**

Combinations of two to three agents are more effective than a single drug for patients at moderate to high risk. The reason, Dr Gan believes, is that many factors cause PONV, including receptors other than 5-HT3. The combination should include drugs with different, complementary mechanisms of action, such as a 5-HT3 antagonist with droperidol, dexamethasone, or promethazine. Doses should be reduced for combination therapy, although optimal doses are not known.

**Treating nausea and vomiting**

Patients with PONV after surgery should be examined to rule out an underlying medication effect or mechanical cause. If no prophylaxis was given before or during surgery, the patient can receive a 5-HT3 antagonist. The dose can be lower than that typically used for prophylaxis. Efficacies and doses of antiemetics are not well established.

When a prophylactic antiemetic is ineffective, rescue medication should include a different drug class. For example, a low-dose 5-HT3 antagonist can be used to treat PONV after failure of dexamethasone prophylaxis. If a 5-HT3 antagonist fails for prophylaxis, the dose should not be repeated within 6 hours after surgery. Likewise, if double or triple therapy was given for prophylaxis, the same combination should be avoided for the first 6 hours after surgery. Propofol may help reduce PONV when given in the recovery room.

Dr Gan explained the 6-hour cutoff for 5-HT3 antagonists: “Although the package insert recommends that one dose of a 5-HT3 antagonist such as ondansetron should work for 24 hours, based on the published evidence we have seen, it certainly does not.” Therefore, for PONV occurring more than 6 hours postoperatively, a 5-HT3 antagonist or promethazine can be repeated. Dexamethasone and transdermal scopolamine should not be repeated within 24 hours because of their longer duration of action. Little is known about the proper doses for repeat administration of agents or for triple therapies.

**Advice for nurse managers**

These evidence-based guidelines provide managers with “a comprehensive summary of the current thinking based on the evidence on the management of PONV,” Dr Gan noted.

Practitioners should use the algorithm preoperatively when planning anesthesia and discuss risk factors with patients. They can then decide which patients are good candidates for prophylaxis.

The guidelines also suggest approaches for treating PONV after prophylactic antiemetics have failed or no prophylaxis was given.

Finally, the guidelines are a resource on drug choices, doses, and cost-effectiveness to assist clinicians in using antiemetics appropriately for particular settings. The information can help in preventing or controlling PONV to avoid extended stays in the recovery room or overnight hospital admissions.

**Future directions**

“The article states very clearly what we currently know, what is the level of evidence, and therefore what we don’t know,” Dr Gan said.

“Researchers, after reading the article, can then plan for future studies to address those areas that are lacking information.”

One potential study is to examine smaller doses of 5-HT3 antagonists in combination with dexamethasone.  

—Laura Ninger

**Reference**


**Risk factors in children**

Risk factors for postoperative nausea and vomiting in children are similar to those in adults, with the following differences:

- Studies in children are often limited to data on vomiting only and not nausea.
- Vomiting incidence is twice as frequent in children as in adults.
- Risk increases as children age, decreasing after puberty.
- Sex differences are not seen before puberty.
- Risk increases more consistently with specific operations.

If morale dips at your center, try FISH!

As morale at your surgery center taken a dip? You might take your staff on a fishing expedition.

Rebecca Craig, RN, CNOR, was looking for a new angle on team building when she ran across the book *FISH!* at Barnes & Noble.

She took it home to read and immediately decided to share it with the management team and staff at the Harmony Ambulatory Surgery Center LLC in Fort Collins, Colo, where she is the administrator.

She went back and bought ten copies and began taking the center on a journey into the Fish Philosophy. *FISH!*, a 2000 best seller, tells the story of workers at Seattle’s Pike Place Fish Market who, despite their cold, wet, and smelly environment, bring fun and a strong customer focus to their work.

The workers were discovered by John Christianson, head of Charthouse Learning, a corporate education company. He brought his video camera to the market and began filming how the workers go through their day. He distilled their approach into four simple concepts that became the Fish Philosophy. That led to a series of books, speaking engagements, and other products (www.fishphilosophy.com).

The book focuses on a woman, Mary Jane, who after the death of her husband, is offered a promotion, which she needs, to head a department others describe as a “toxic energy dump.” The department is full of negative employees who call in sick, lose files, put other employees on hold, and generally bide their time until retirement.

One day, while mulling her situation, Mary Jane visits the fish market. She enjoys watching the workers as they toss fish around and banter with customers. She gets to know them, learns how they cope with their work, and begins applying their approach to the “toxic energy dump.” Not surprisingly, the department is transformed.

An engaging approach
Craig found the story engaging. It also offered an approach she thought the staff would accept.

“The concepts are easy to grasp, and it has a good story line,” she says. “It’s not theoretical, and it gives you a clear program to follow.”

Harmony’s other managers agreed. “They were 100% behind it, which helped convey enthusiasm to the rest of the staff,” she says.

In effect, FISH! became a quality improvement project for team building. Managers set aside a small budget for the project. They also decided employees’ participation in FISH! should be a part of their performance evaluation. Staffs’ involvement in the project helps satisfy criteria such as offering solutions to help teams succeed, showing enthusiasm and a “can-do” attitude, and participating in quality improvement projects.

To kick off the project, Craig had a colorful laminated card made with the Fish Philosophy that the staff could wear with their ID badges.

Though she planned the project would take 3 months, it actually took 6 months because the teams had to find time to meet. But the results have been gratifying. Craig has observed improved teamwork and higher spirits.

To start with, Craig told the employees she would give them $25 to read *FISH!*, using money from the center’s reward and recognition program. (Copies are available at most bookstores and even supermarkets.)

She then basically followed the approach Mary Jane uses in the book.

After most of the staff had read the book, Craig presented the project at a staff meeting. (See team guidelines.) She asked each staff member to choose one of four teams based on the Fish Philosophy:
- Choose your attitude.
- Find ways to play.
- Be present with customers.
- Make their day.

Each team was given $200 and told to meet three or four times to come up with ways to carry out their theme. They also corresponded by e-mail. They were told they would be expected to make a presentation to the rest of the staff with action items the group could consider for implementation.

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Team guidelines

- Teams will have 6 weeks to meet, study their topic, collect additional information, and put together a presentation that will be made to the entire group.
- Each presentation must have some action items that we can consider for implementation.
- Teams will be responsible for setting their own meeting times and may use 2 hours of work time each week for team business. Arrangements must be made to cover the work of those at team meetings and during business hours.
- Each team has a budget of $200 to be spent at its discretion.
- Teams will facilitate their own meetings.
- I [the manager] will be available to troubleshoot if the team reaches an impasse, but I would rather the team work out its issues as a team.


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Six months later at a staff meeting, the whole group met to share their plans and present their projects. Here are some of their ideas:

Choose your attitude

When you look for the worst, you will find it everywhere. When you learn you have the power to choose your response to what life brings, you can look for the best and find opportunities you never imagined possible.

—Fish Philosophy

The Harmony team decided one way to reinforce positive attitudes was to reward people.

Craig keeps a basket in her office with goodies such as Dairy Queen and Starbucks gift certificates. If a staff member identifies someone who has turned a situation around with a positive attitude, they can take an item from the basket and say, “Thanks for choosing your attitude.”

Examples are communicating well with a patient and family about a delayed surgery or defusing a tense situation with a physician or coworker.

The team also is making a bulletin board for the break room, which will have every employee’s picture and name. That will give new employees and medical students a way to get to know the team.

They will also post a saying of the week each Monday morning, some funny and some serious.

Find ways to play

Work made fun gets done, especially when we choose to do serious tasks in a spontaneous, lighted-hearted way.

—Fish Philosophy

The play team decided to place crossword puzzles, games, coloring books, and crayons in the family waiting room. They decorated some of the wheelchairs, using handlebar streamers like the ones on kids’ bicycles and fish motifs. They had to find decorations that wouldn’t interfere with the chairs’ function and would be easy to clean.

They also proposed having murals painted in the bays used for preoperative and postoperative care. The idea was not only to add playfulness but also give patients soothing designs to look at. They plan to use fish, forest, and jungle themes.

Be present

The glue in our humanity is in being fully present for one another.

—Fish Philosophy

The “be present” team chose a skit to illustrate their principle of being focused on patients and colleagues instead of being distracted by other concerns.

In the skit, two nurses were walking down the hall with a patient. The first nurse says to the patient, “We’re taking you to your room to get your IV started.” She then turns to the other nurse and says, “So how was your weekend?” leaving the patient out of the conversation. The second nurse begins to chat about their social plans.

They then revisited the scene to illustrate how they would include the patient, perhaps by asking the person about a favorite movie.

The group also had colorful Fish posters made about being present. Posters are placed in key locations where staff might need a reminder, such as over the hopper where waste is poured.

Make their day

When you make someone’s day (or moment), through a small act of kindness or an unforgettable engagement, you can turn even routine encounters into special memories.

—Fish Philosophy

This team explored ways that they would engage both with patients and their colleagues to make sure they had a pleasant experience. Among other things, the group had buttons made about making their day.

Not fade away

Craig found the project was a good way to engage the staff in team building.

“It gives the whole team tools for good communication,” she says. One benefit is that it gives reticent employees a way to address attitude issues with colleagues. Because of FISH! they can use the gentle reminder, “We can choose our attitude.”

Craig has promised not to let the concepts fade away.

“We’ll ask the staff at our meetings whether they think we need to regroup,” she says.

Craig also keeps her own informal barometer of morale. At each meeting, she asks managers to rate their department’s morale on a scale of 1 to 10. She jots down the results and tracks the trends. Though dips are expected, she takes note if a trend continues.

“If it drops, we’ll see if we need another FISH!” she says.
Hospitals, ASCs await fate of payment proposals

As the Medicare prescription drug bill inched toward a compromise between the House and Senate in October, hospitals and ambulatory surgery centers (ASCs) awaited the fate of funding measures in the bill.

The House version would set a 5-year limit on ASC payment updates at inflation minus 2%, but the Senate bill does not address this. ASCs are urging Congress to allow Medicare payments to keep pace with inflation. A similar reduction was not proposed for hospital outpatient departments.

ASC representatives recently met with congressional and agency staff to discuss a plan to reform the ASC payment system. Whether these provisions would be included in the conference bill was unknown at press time.

Meanwhile, hospitals were rallying to stave off a House proposal to cut inpatient payments by 0.4% off inflation. The Senate bill would provide a full market-basket update. The House hinted it might propose a deeper cut following a letter from the Medicare Payment Advisory Commission that hospitals’ inpatient margins had risen.

Special measures are proposed in the bills to protect rural, disproportionate share, and safety net hospitals.

California staffing law still toothless

California’s nurse staffing ratio law remains without penalties after measures authorizing tougher enforcement were defeated in September. The California Senate had approved a California Nurses Association-sponsored bill to enforce the staffing law on a 24-13 vote earlier in the month.

The bill called for unannounced hospital inspections and fines of up to $5,000 a day for violations that put patients in “immediate jeopardy.” Currently, the state can fine hospitals $50 per patient per violation.

The law, which takes effect Jan 1, requires hospitals to staff at least one nurse for every six patients in medical–surgical units.

Lobbyists say they will push for heavier sanctions next year.

—DailyDose@ModernHealthcare.com

Illinois governor signs bill to register surgical techs, assistants

Illinois has approved a bill that will protect the titles “registered surgical technologist” and “registered surgical assistant.” The bill is for title protection only, not licensure.

To register, personnel would have to be graduates of an approved program and be certified.

The law does not require facilities to hire these registered personnel. Nor does the law prevent licensed MDs, RNs, physician assistants, or nonregistered surgical techs or assistants from performing duties in surgery.

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Companies honored for supporting conference

Ten companies that have participated in the Managing Today’s OR Suite meeting for 10 years or more were honored at the conference in September in San Diego. Though some companies have changed their names, their support has continued. The companies honored were:

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Ethicon
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Judy Pins of Cardinal Health accepts a plaque recognizing 15 years of participation in Managing Today’s OR Suite.

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Please see the ad for OLYMPUS ENDOSCOPY in the OR Manager print version.
Please see the ad for BOVIE MEDICAL in the *OR Manager* print version.
Patient deaths more common in office surgery

Patients in Florida were ten times more likely to die or suffer an adverse event in office surgery than in an ambulatory surgery center (ASC), according to a 2-year analysis by the Florida Board of Medicine. Adverse incidents occurred at a rate of 66 per 100,000 procedures in the office setting and 5.3 per 100,000 in the ASC. The death rate per 100,000 procedures was 9.2 in offices and 0.78 in ASCs. If all office surgeries had been performed in ASCs, about 43 injuries and six deaths per year could have been prevented.


Reducing turnover time has little impact on staffing costs

Surgeons generally rate turnover times as the most important measure of performance for a surgical suite. But studies have shown little cost reduction from reducing turnover time, other than for short cases.

The common belief is that reducing turnover time will save on staffing costs because fewer staff members will be working late. A new study involving four academic hospitals finds the actual cost reductions are small.

Reducing average turnover times by 3 to 9 minutes resulted in 0.8% to 1.8% reductions in staffing costs; reducing turnover by 10 to 19 minutes reduced costs by 2.5% to 4.0%.

The study also found, surprisingly, that the reduced costs came primarily from reducing allocated OR time, not reducing the time the staff worked late. The reason is that if turnover times are reduced in many ORs over several weeks, the OR allocations also will be reduced. That is where most of the savings come from, says the lead researcher, Franklin Dexter, MD, PhD.

The study presents a method surgical suites can use to evaluate the impact of changing turnover time using their own data.


More nurses being named in malpractice lawsuits

From 1998 to 2001, the number of malpractice payments by nurses increased from 253 to 413, and the trend appears to be continuing, according to a report in the American Journal of Nursing.

Six major categories of negligence that result in lawsuits are failure to:
- follow standards of care
- use equipment in a responsible manner
- communicate
- document
- assess and monitor
- act as a patient advocate.

In acute care, medical-surgical units accounted for the largest percentage of cases (32%), followed by obstetrical units (16%). Coronary care and intensive care units, operating rooms, and pediatrics accounted for 3% each.

OR-related lawsuits fell under the first two categories. In one case, the nurse ordered a product that was contraindicated for a spinal fusion case without seeking a review.

Another case involved the death of a 45-year-old woman from a massive air embolism after a hysteroscope was set up incorrectly. Nurses had not been trained on its use.

—Croke E M. AJN. September 2003;103:54-62.

Hospital quality differs by state

Quality of care in hospitals varies markedly by state, according to an annual report from HealthGrades that rates each of the nation’s nearly 5,000 hospitals.

Better-performing hospitals were concentrated in northern and less populated states, and the worst performers were in the South.

Patients have a 55% increased chance of dying if they have an angioplasty or other percutaneous coronary intervention in Texas rather than New York, notes Samantha Collier, MD, HealthGrades’ vice president of medical affairs.

A patient’s chance of dying of a heart attack is 49% higher on average in Mississippi than in Colorado.

Attention to improvement at the state level seems to be having an impact, the study found.

—www.healthgrades.com