Study of perioperative med errors provides clues for improving care

What types of medication errors occur in perioperative services? What can be done about them?

In a 3-year project, students in the perioperative services clinical specialist master’s program at the Uniformed Services University of the Health Sciences (USUHS), Bethesda, Md, analyzed 7 years’ worth of data from MEDMARX, the US Pharmacopeia’s national database of adverse drug events in hospitals, to discover types and causes of errors in perioperative areas. The analysis covered same-day surgery, the preoperative holding area, the operating room, and the postanesthesia care unit (PACU). In addition to the overall trends, the students analyzed patterns of errors for pediatric and geriatric patients.

The group, led by the program’s director, COL Linda Wanzer, AN, RN, MSN, CNOR, reported overall and pediatric data at the Managing Today’s OR Suite conference in October 2005 in San Diego. USUHS is the nation’s federal health sciences university. Its Graduate School of Nursing is committed to meeting the needs of advanced practice nurses in the uniformed services.

This issue reports highlights of the findings and recommendations for preventing errors offered by LCDR Dennis E. Glover, USN, RN, BSN, CNOR, and CDR Janet M. Bradley, NC, RN, MSN, CNOR.

Team communication

Getting teams to talk: Learning to improve OR communications

A circulating nurse and anesthesiologist have just finished positioning a patient supine and tucking in the arms. The surgeon arrives and says, “Oh, I’m going to need the patient in Trendelenburg.” Extra time is needed to reposition the patient. Or a surgeon asks for a certain instrument. The one in the set is not the type he wants. The scrub nurse explains there is a lag in updating the preference card. The surgeon says, “Well, this is stupid. We’re ordering new stuff and getting old stuff.” The team waits while the circulating nurse calls for the right instrument.

Communication problems like these happen in ORs every day. Sometimes the result is more serious—an antibiotic isn’t given on time, a blood product isn’t ready, or even worse, the wrong patient is operated on or the wrong medication is given.

Communication gaps not only raise tension and impair efficiency, but they also endanger patients. More than 60%...
Please see the ad for
MEGADYNE
in the OR Manager print version.
Smoothing the flow
Read how one hospital persuaded surgeons to revise the elective schedule to reduce strain on the rest of the facility.

Specialty teams
An approach to balancing the need for specialization while keeping competent staff for call.

Getting started on briefings
It can be hard to get briefings off the ground. But once in place, the benefits are clear, those who’ve implemented them say.

Some of their advice:
- Get buy-in—always the biggest step in any OR leadership initiative. Patient safety is the selling point, says Samir Awad, MD, who led the Baylor study.
- Pick your champions carefully, and get support from the senior administration, adds Farah Pakseresht, RN, regional director for surgical services for Kaiser Permanente’s Northwest Region.
- Build enthusiasm. Baylor and Kaiser made a big deal of introducing briefings—closing the ORs for a day to provide training and a kickoff.
- Decide when to hold briefings. Timing is a challenge. It’s logical to do the briefing right before the procedure at the same time as the timeout, says Dr DeFontes. It’s about forming a team—making sure members know each other’s names and feel free to speak up. “Do it at the easiest time, and do it consistently,” he advises.
- Decide who starts the briefing. Don’t just add it to nursing’s to-do list. Dr DeFontes prefers that the surgeon take the lead, just as the pilot would in the cockpit. If that doesn’t happen, the circulator initiates it.
- Provide training and support. It can be hard for the staff to get used “to being on stage,” Pakseresht says, so it’s important to include assertiveness training.
  She tells of one nurse who spoke up and stopped a pediatric case. Everyone was angry at first, but it prevented a serious error.
- Celebrate successes. Pakseresht monitors compliance by staff and surgeons and makes sure to recognize improvements.
- Don’t reinvent the wheel. Each OR and each specialty thinks it has to develop its own briefing checklist from scratch. “People tend to err on the side of processing things to death,” Dr DeFontes says. Take the work that’s already been done, pilot it, and start from there, he suggests. (See examples on p 17 and p 20.) More resources are in the OR Manager Toolbox at www.ormanager.com.

Taking an extra minute or two before a case to hold a briefing doesn’t seem long when you consider the difference it could make.

—Pat Patterson
Please see the ad for
KARL STORZ ENDOSCOPY-AMERICA
in the OR Manager print version.
Innovative approaches to turnover time

A “liberated” circulator and parallel processing helped reduce turnover time in 2 new studies published in surgical journals.

The studies documented that redesigning workflow can shorten turnover time enough to be able to add cases in the controlled environments of the studies.

Shands Hospital at the University of Florida, Gainesville, in a pilot study published in the Archives of Surgery, reduced turnover for 401 cases from an average of 44 to 28 minutes. That was enough to increase the number of cases completed per day from 1.8 to 2.3 for the pilot-study room. Three of the 4 surgeons involved saw an increase in their caseload.

In the project, a study team mapped between-case activities for the anesthesiologist, circulating nurse, and scrub person and proposed changes. The circulating nurse’s role changed the most, notes Juan Cendán, MD, the general surgeon who led the study.

In diagramming between-case activities, the team found the circulator’s duties included delivering specimens, picking up medications, and assessing the next patient. In the workflow redesign, the circulator was “liberated” 10 to 15 minutes before the end of the case to allow time for these activities. Relief was provided by an assistant charge nurse.

There are ideas OR managers can take away.

The anesthesiologist was assisted between cases by an anesthesia technician so the anesthesiologist could go to the postanesthesia care unit (PACU) and the pharmacy.

The scrub technician’s activities did not change significantly.

The pilot has since been expanded to 4 of Shands’s 27 ORs, says Gail Avigne, RN, BS, CNOR, nurse manager for the OR and other departments.

New work model

The model, termed Transition to Practice (TTP), is intended to prepare senior anesthesia residents for private practice, where the pace is typically faster than in an academic medical center. Short cases are assigned to the TTP rooms, such as hernia repairs, laparoscopic cholecystectomies, ENT cases, and gynecologic procedures.

With a staffing ratio of 50% RNs and 50% surgical technologists, Avigne says there are not many extra RNs to relieve the circulators, so an assistant charge nurse was allocated to the project.

The TTP rooms function as a pod. Cases are hand picked, and surgeons are assigned as a reward for being expeditious. Staff are also assigned selectively. The assistant charge nurse who relieves the circulators now functions as a team leader for the TTP rooms.

“It’s been an innovative way to address turnover time,” says Avigne, though Shands doesn’t plan to expand the model to all of the ORs.

“I don’t think everyone has to do things the same way,” she notes. The model wouldn’t suit some surgeons or staff, and it wouldn’t increase the number of cases in rooms with long procedures. Nevertheless, “what happens in the TTP rooms does tend to affect the others,” she notes.

The TTP model increases costs because of the extra staffing at the end of the case. Though the authors didn’t do a cost study, they say the expense of the extra nursing time “would be small” compared with the extra revenue generated by the additional cases.

“It’s great to be able to get your cases done in a normal day,” Dr Cendán comments. He says he now can complete a schedule by 5 pm that used to take until 7 pm, which encourages him to schedule more cases.

Parallel processing

In the second study, researchers at Massachusetts General Hospital in Boston examined whether parallel processing—performing some tasks simultaneously—could reduce turnover times for hernia repairs performed under local anesthesia with sedation.

All cases were performed by 1 surgeon who routinely operated on Wednesday and Thursday. During the study, he performed the Wednesday cases using the study protocol and the Thursday cases with the usual routine as a control. There was also a historical control group.

The major changes in the study cases, which did not require additional personnel, were:

• creating an OR team that stayed
Please see the ad for
CTC CARDINAL HEALTH
in the OR Manager print version.
continued from page 5

• performing the sedation, block, and prep in the holding area before taking the patient to the OR.

Results showed operating time stayed the same, but turnover time was significantly reduced (average 18 minutes for the study group versus 24 minutes for the control group and 33 minutes for the historical controls). OR time used on study days was reduced 33% compared with controls. The time savings allowed the surgeon to shift all of his cases to Wednesday without reducing his caseload.

Ideas to take away

Though the studies were limited in the types of procedures and physicians, there are ideas OR managers can take away even if their facility is not a large teaching institution like those in the studies, says Judy Dahle, RN, MS, director of OR Benchmarks, who has analyzed turnover time extensively.

Flowcharting workflow between cases, as the Shands group did, is helpful, she suggests. There may be activities that can be consolidated or reassigned to reduce turnover time.

“In both of these studies, they are rethinking the traditional roles to see if there are other ways to do things,” she notes. “When you do that, you are bound to get more efficient even if you can’t add another case to the schedule.”

A researcher comments

The studies, along with others in the literature, show “clinicians can and do reduce turnover times with little personal incentive,” comments Franklin Dexter, MD, PhD, of the University of Iowa, a leading researcher on OR management.

“Provided the team receives quantitative feedback and has ancillary personnel available to help them, average turnover times of as low as 20 to 25 minutes can be achieved and sustained,” he says.

There is a caution, however. With increased patient flow, nurses have reported feeling overextended and exhausted, as documented by Stahl and colleagues in the OR of the Future project at Massachusetts General. They also may not feel as connected with their patients because they have less contact with patients when awake.

In both the Shands and OR of the Future studies (reported by Sandberg and coauthors), reduced turnover time did motivate surgeons to schedule more cases. Improved workflow was also associated with greater sense of personal competence and achievement for the surgeons in the OR of the Future project.

References


Cell phone use in OR could improve patient safety, a survey shows

Many health care facilities ban cell phones in patient care areas because of concerns about interference with medical equipment.

A new study suggests clinicians’ use of cell phones instead of pagers could actually improve patient safety.

Researchers distributed a questionnaire to all attendees of the 2003 American Society of Anesthesiologists conference. The survey asked what mode of communication anesthesiologists used in the OR and ICU, whether they had experienced any significant delays in communication, and whether they had observed an error or injury because of delayed communication. The survey also asked if respondents’ facilities allowed cell phone use in the OR and ICU if they had ever observed interference between the cell phone and a medical device. In all, 4,018 surveys were returned, a 51% response rate.

Interference was rare

The results showed:

• 65% used pagers as their primary means of communication, while 17% used mobile phones.
• Overall, users of cell phones reported a decreased risk of error or injury compared with pager users.
• Interference from cell phones was rare, reported by 2.4%.

Interestingly, 49% of those who used cell phones said their facility did not allow them.

The authors thought the most likely reason for the lower error risk with cell phones was that information could be relayed more quickly. In contrast, those who rely on pagers must wait for a page to be answered.

Interference was rare probably partly because cell phone technology has improved to use very low levels of energy. In addition, newer medical devices are shielded against interference, and modern telemetry equipment operates on a different frequency than wireless devices like cell phones, the authors note.

In another study published last fall, researchers at the Mayo Clinic tested 6 types of cell phones with 16 different medical devices and found the phones did not interfere with equipment that was more than 3 feet away. Though 44% of the devices recorded some interference, the vast majority “should not have any significance for the patient,” the researchers said. This was an improvement over earlier tests. The authors said cell phones will need to be tested periodically for their effects.

References


Check our web site for the latest news, meetings, and other practical help.

www.ormanager.com
Medication errors in perioperative services

Highlights of a 3-year project to analyze 7,234 perioperative medication errors.

The analysis of the MEDMARX database was conducted by students in the perioperative services clinical specialist master’s program at the Uniformed Services University of the Health Sciences, Bethesda, Md.

Overall observations

- Same-day surgery, the OR, and the postanesthesia care unit (PACU) were relatively equal in the frequency of errors. The preoperative holding area had the lowest frequency of errors.
- The OR and PACU accounted for 81% of the harmful errors. For pediatric patients, that was even higher—94%.
- The largest percentage of errors—55%—was in the administering phase of the medication-use process.
- 86% of the harmful errors were in the administering (62%) or prescribing (24%) phase.
- Distractions were the leading contributing factor to errors in all 4 perioperative areas.

Where did harmful errors occur?

<table>
<thead>
<tr>
<th>Area</th>
<th>Percentage of harmful errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Same-day surgery</td>
<td>4% (79/2,212)</td>
</tr>
<tr>
<td>PACU</td>
<td>32%</td>
</tr>
<tr>
<td>Operating room</td>
<td>49%</td>
</tr>
<tr>
<td>Preop holding</td>
<td>2%</td>
</tr>
</tbody>
</table>

In which phase did harmful errors occur?

<table>
<thead>
<tr>
<th>Phase</th>
<th>Adults</th>
<th>Pediatrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring</td>
<td>3%</td>
<td>9%</td>
</tr>
<tr>
<td>Prescribing</td>
<td>29%</td>
<td>18%</td>
</tr>
<tr>
<td>Administering</td>
<td>58%</td>
<td>73%</td>
</tr>
<tr>
<td>Documenting</td>
<td>3%</td>
<td>2%</td>
</tr>
</tbody>
</table>

The data cover outpatient surgery and 23-hour-care units.

Most common types of errors

<table>
<thead>
<tr>
<th>Type</th>
<th>Adults</th>
<th>Pediatrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omission (missed dose)</td>
<td>25%</td>
<td>30%</td>
</tr>
<tr>
<td>Improper dose/quantity</td>
<td>18%</td>
<td>33%</td>
</tr>
</tbody>
</table>

Causes of errors

<table>
<thead>
<tr>
<th>Cause</th>
<th>Adults</th>
<th>Pediatrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>15%</td>
<td>26%</td>
</tr>
<tr>
<td>Documentation</td>
<td>10%</td>
<td>13%</td>
</tr>
<tr>
<td>Calculation error</td>
<td>3%</td>
<td>12%</td>
</tr>
<tr>
<td>Transcription</td>
<td>5%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Highlights

- Most of the errors in same-day surgery occurred during the administering phase and prescribing phase.
- Over half of the errors reached the patient—66% of errors for pediatric patients and 55% of errors for adults.
Patient safety

Operating room
Percentage of harmful errors: 9% (223/2,410)

In which phase did harmful errors occur?

Most common types of errors

<table>
<thead>
<tr>
<th></th>
<th>Adults</th>
<th>Pediatrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improper dose/quantity</td>
<td>16%</td>
<td>33%</td>
</tr>
<tr>
<td>Extra dose</td>
<td>3%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Causes of errors

<table>
<thead>
<tr>
<th></th>
<th>Adults</th>
<th>Pediatrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>18%</td>
<td>23%</td>
</tr>
<tr>
<td>Calculation error</td>
<td>2%</td>
<td>11%</td>
</tr>
<tr>
<td>Verbal order</td>
<td>3%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Highlights

- Overall, 8% of the medication errors in the OR were harmful. Harmful errors were twice as prevalent in pediatric patients—17%.
- As in the other perioperative areas, the administering phase was the most common step when errors occurred.
- The leading cause of errors was communication, followed by miscalculation (again, much more common in children), and verbal orders.

Postanesthesia care unit
Percentage of harmful errors: 7% (146/2,236)

In which phase did harmful errors occur?

Most common types of errors

<table>
<thead>
<tr>
<th></th>
<th>Adults</th>
<th>Pediatrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improper dose/quantity</td>
<td>22%</td>
<td>46%</td>
</tr>
<tr>
<td>Extra dose</td>
<td>5%</td>
<td>13%</td>
</tr>
</tbody>
</table>

Causes of errors

<table>
<thead>
<tr>
<th></th>
<th>Adults</th>
<th>Pediatrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculation error</td>
<td>3%</td>
<td>16%</td>
</tr>
<tr>
<td>Decimal point</td>
<td>0.7%</td>
<td>5%</td>
</tr>
<tr>
<td>Dosage form confusion</td>
<td>2%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Highlights

- Similar to the OR, 7% of errors in the PACU were harmful; 20% of errors involving pediatric patients resulted in harm.
- Wrong amounts, calculation errors, and misplaced decimals are many times more common as causes of error in children than in adults.
- Though nurses are not the only ones responsible for errors in the PACU, they are usually the ones who give the drugs to patients. Nurses were responsible for 63% of the pediatric medication errors reported in the PACU.

How patients are harmed by periop medication errors

Errors like these are leading to improvements in medication safety.

Patient: Ben Kolb, 7 years old
Error: Wrong medication
Outcome: Death

In this widely reported incident from 1995, due to a mixup of medications on the sterile field during elective ear surgery, Ben was injected with topical epinephrine 1:1,000 instead of lidocaine 1% with 1:100,000 epinephrine. The incident was the basis for JCAHO’s Sentinel Event Alert no. 16.

Patient: 5-day-old infant
Error: Incorrect dose
Outcome: Death

The surgeon gave a verbal order to the anesthesiologist for 180 mcg instead of 18 mcg of Digoxin IV. The error went undetected and resulted in a 10-fold overdose.

Patient: Shoulder arthroscopy
Error: Wrong drug/storage issue/distractions
Outcome: Death

The surgeon asked for 0.5% Marcaine. The nurse instead grabbed a multidose vial of epinephrine stored next to the Marcaine and passed it to the sterile field without a double check. The surgeon injected 30 cc of 1:1,000 epinephrine.

Patient: 69-year-old woman
Error: Medication mixup (no label)
Outcome: Death, 19 days later after an amputation, stroke, and multi-organ failure

The patient, who was in the interventional radiology department for a brain aneurysm, was supposed to receive a contrast medium. Instead, she received chlorhexidine. Both clear solutions were on the prep table unlabeled.

Compiled by COL Linda Wanzer, AN, RN, MSN, CNOR.

AORN Congress

The geriatric data from the project will be presented at the Association of periOperative Registered Nurses (AORN) Congress March 19-23 in Washington, DC. A US Pharmacopeia chartbook with the findings will be available.
Please see the ad for
3M HEALTHCARE
in the OR Manager print version.
The vast majority of medication errors in surgical services happen when drugs are administered and prescribed.

Leaders of the study on perioperative medication errors by the Uniformed Services University of the Health Sciences offered recommendations for preventing errors. 

Think beyond the ‘5 Rights’
The “5 Rights” are the mantra for medication administration—right drug, right patient, right time, right route, right dose. But they can give a false sense of security.

“The 5 Rights offer some protection, but they focus narrowly on a single task—medication administration,” says COL Linda Wanzer, AN, RN, MSN, CNOR. “With the 5 Rights, we assume all of the previous steps have been done correctly. But what if an error occurred in a previous step? What if a drug is ordered for a patient with a documented allergy? What if the surgeon’s preference card is not up to date?

“Don’t rely entirely on the 5 Rights,” Wanzer cautioned. “The entire medication use process needs to be reviewed.”

Focus on error-prone steps
The medication-use process has 5 steps:
1. Prescribing
2. Dispensing
3. Administering
4. Documenting
5. Monitoring

Consider focusing education on administering and prescribing, which accounted for most of the perioperative errors in the MEDMARX data, suggests CDR Janet M. Bradley, NC, RN, MSN, CNOR, one of the leaders of the study.

Use AORN medication safety tool kit
The Association of periOperative Registered Nurses (AORN) has issued a

Safe Medication Administration Tool Kit (www.aorn.org/toolkit/safemed) with perioperative medication competencies, educational tools, and other resources. CEUs are offered.

“The AORN tool kit gives us direction—now we need to use it,” Bradley says.

Implement the National Patient Safety Goals
Think how the National Patient Safety Goals from the Joint Commission on Accreditation of Healthcare Organizations can improve perioperative medication safety, Bradley advises. Among applicable requirements:

Goal 2E: Implement a standardized approach to handoff communications
The 2006 requirement to standardize handoffs could help avoid errors caused by inaccurate or missing documentation. In the MEDMARX data, omission was the most common type of error in same-day surgery and the preop holding area. One type of medication that is missed is prophylactic antibiotics.

“Think about how many missed preoperative antibiotics might have been caught if we had one form with all of the patient’s medication information on it and did not have to count on the chart being complete or locating the medication record,” Bradley says.

Improper doses were another leading type of error.

“How many of those errors might have occurred because of incomplete, missing, or wrong information about the patient, such as weight or allergies?” she says.

Goal 3D: Labeling medications
The 2006 requirement to label medications and other solutions on and off the sterile field is a response to notorious errors. In a well-known case, 7-year-old Ben Kolb died after being injected with topical epinephrine 1:1,000 instead of a mixture of lidocaine and epinephrine. More recently, a 69-year-old women died after a mixup resulted in her being injected with chlorhexidine instead of a radiological dye.

Children are especially at risk—7 of 45 pediatric errors in perioperative areas were attributed to unlabeled medications.

The JCAHO requires:
• Labels to include the drug name, strength, amount (if not apparent from the container), expiration date when not used within 24 hours, and expiration time when expiration occurs in less than 24 hours. (A requirement to include initials was removed in January. See p 15.)
• All labels to be verified both verbally and visually by 2 qualified individuals when the person who prepares the medication is not the same as the person administering the medication.

AORN has suggested a protocol for handling of medications in the OR, which is in its tool kit as well as in its 2005 Standards, Recommended Practices, and Guidelines.

Most ORs already have a labeling policy in effect or are well on their way. The next step is to ensure compliance.

“We not only need to have a policy—we need to enforce it,” Bradley says. She
Please see the ad for
STERIS CORPORATION
in the OR Manager print version.
Pediatric patients are particularly vulnerable to perioperative medication errors. In the OR and postanesthesia care unit (PACU), 94% of medication errors involving pediatric patients were harmful—even higher than the 81% for adults in the MEDMARX study. Pediatric patients in the OR received the wrong amount of a drug twice as often as adults, accounting for 33% of errors in children versus 16% in adults. Mistakes with verbal orders were twice as common in children as adults (6% versus 3%) of the errors).

In the PACU, wrong amounts, calculation errors, and misplaced decimals were many times more common in children.

**Recommendations**

- **Consider using calculation charts.** “Think of the times you have delivered medications on the field in an emergency at the end of a 12-hour shift, with pagers going off and the phone ringing,” says CDR Janet M. Bradley, NC, RN, MSN, CNOR, a leader of the study. How many times have you diluted a med when you weren’t able to give it your full attention? Could a calculation chart prevent you from making an error in these situations?

- **Pediatric weight changes rapidly.** In the same-day surgery and preoperative holding areas, 9% (7 of the 80 errors) were the result of the wrong weight documentation. “When we administer medication based on weight, how often is the patient actually weighed? Are we relying on patients or their families to report that?” she says.

- **Calculate dosages in advance.** When a child is scheduled for surgery at Bradley’s facility, nurses calculate dosages in advance for emergency medications that might be needed, such as atropine and adenosine. The same is true for antibiotics.

- **Premix or dilute medications beforehand and have another nurse double check them.** “Independent double checks are the key,” says Bradley. “Let the other nurse look at the order, make the calculation, and determine how much medication should be mixed or diluted without any input from you.”

Is med safety included in age-specific competencies?

“This goal is a great basis for enhancing communication,” Bradley says. “Whether a case is scheduled or emergent, inpatient or outpatient, we often lack information in the patient’s record. Find a user-friendly process to meet this goal.”

Many ORs use a preoperative checklist to provide key information about a patient at a glance. Another option is a consolidated documentation form, similar to the trifold form used by some ICUs, with information for preoperative, intraoperative, and postanesthesia care. So far, consolidated forms are a rarity, Bradley says. But they could help ensure information isn’t missed. Technology could also help. As perioperative information systems become more integrated, nurses in the OR will be able to bring up information collected preoperatively, such as the last medication administered and allergies. These systems can have alerts for allergies and other safety information.

**Emphasize education and training**

JCAHO’s sentinel events data shows 60% of medication errors were linked to orientation and training. AORN’s tool kit should be used in orientation of new staff as well as in education of existing staff, Bradley suggests.

**Include medications in age-specific competencies**

Is medication safety included in your age-specific competencies? Nurses need reinforcement on the special vulnerabilities of children and the elderly. (See related article on pediatric errors.)

**Consider preoperative briefings**

Communication problems are the leading cause of errors in same-day surgery, preop holding, and the OR, the MEDMARX analysis found.

Preoperative briefings are one way to improve teamwork and communication in the OR, research shows. In a briefing, the OR team meets for a minute or two before the procedure to introduce themselves and discuss special needs for the patient or procedure, including medication issues. (See related articles on OR communication.)

**Share so others can learn**

Organizations can help improve medication safety by submitting voluntary, anonymous reports to MEDMARX.

Subscribers can then use the MEDMARS database to compare themselves with others, analyze trends, and develop best practices for preventing adverse drug events. More than 1 million adverse drug events have been recorded in the database using standard definitions.

Please see the ad for
GETINGE / CASTLE INC.
in the OR Manager print version.
What’s needed for med reconciliation?

The Joint Commission on Accreditation of Healthcare Organizations in a Jan 25 sentinel event alert urged giving more attention to reconciling medications—assuring accuracy of meds as patients move from one setting or practitioner to another.

When medications aren’t reconciled, patients may receive duplicate drugs, incompatible drugs, or wrong doses, among other errors.

JCAHO’s sentinel event data shows 63% of medication errors resulting in death or serious injury were due to a breakdown in communication. About half would have been avoided by effective medication reconciliation.

The alert reinforces JCAHO’s National Patient Safety Goal 8, which requires reconciling medications across the continuum of care. Requirements include:

- implementing a process for obtaining and documenting a complete list of the patient’s current medications on admission
- communicating a complete list of medications to the patient’s next provider or service.

Speakers suggested how to reconcile medications for surgical patients during an audioconference on OR communication Jan 25 sponsored by Joint Commission Resources (JCR) and the Association of periOperative Registered Nurses (AORN).

At a minimum, the speakers noted, reconciliation must occur:

- any time the organization requires that orders be rewritten
- any time the patient changes service, setting, provider, or level of care and new medication orders are written.

For example, a patient has had outpatient surgery, and the surgeon writes a discharge order for an antibiotic and a pain medication. This is a change to the patient’s current medication list.

“The goal doesn’t state that the physician must write an order for all medications the patient is taking at home. But a complete list, including the newly prescribed medications, must be given to the next provider if a change is made. This is a communication hand-off to the next provider,” explained Chris McGreevey, RN, MS, a JCR consultant.

Giving the list to the patient to give to the next provider isn’t sufficient, she added. “You must try to get it to the next provider.” For example, if the list should go to the patient’s primary care physician, it could be put in the physician’s mailbox or faxed to the physician’s office.

She told of one hospital that revised its process after it had a major incident. In the new process, a nurse takes down a list of the patient’s home medications when the patient arrives. The list is placed on the front of the patient’s medical record. When a physician writes an order, the physician looks at the home medication list to see if there is anything he or she wants to modify—which is the reconciliation.

**Suggested strategies**

Other strategies for medication reconciliation were suggested by Doreen Wagner, RN, MSN, CNOR, representing AORN:

- “Recognize it’s not making a list for the sake of making a list,” she said. The purpose is to use the information to properly treat the patient.
- Define responsibility for reconciling variances between the home meds and the new orders, and specify a time frame for that activity.
- Develop an “active medications” report.
- Develop a list of circumstances that would trigger involvement by the pharmacist and/or physician.
- Educate patients why it is important to provide a complete list of their medications.
- Develop an electronic process for tracking medications that moves with the patient.

JCAHO revises med labeling rule

OR staff who prepare medications on the sterile field no longer are required to include their initials and the date on the label.

The Joint Commission on Accreditation of Healthcare Organizations in January revised the expectations for complying with the labeling requirement under 3D of the 2006 National Patient Safety Goals.

JCAHO says it deleted the requirement to be consistent with its Medication Management standard MM 4.30. Perioperative nurses had protested that adding the initials and date was unnecessary and would not improve safety. They noted that sterile, preprinted labels cannot include the initials and date. They also said adding initials and dates to multiple medications might distract nurses from other duties, which could be a risk to patient safety.

The revised implementation expectations state:

- Labels will include the drug name, strength, amount (if not apparent from the container), expiration date when not used within 24 hours, and expiration time when expiration occurs in less than 24 hours
- All labels are verified both verbally and visually by 2 qualified individuals when the person preparing the medication is not the person administering the medication.

The revised implementation expectations are at www.jcaho.org. Look under National Patient Safety Goals.

**JCAHO’s sentinel event alert is at www.jcaho.org.**
Please see the ad for MCKESSON in the OR Manager print version.
Team communication

Continued from page 1

of sentinel events reported to the Joint Commission on Accreditation of Healthcare Organizations—and more than 70% of wrong-site surgery events—are attributed to lapses in communication.

Researchers have been studying communication failures in the OR and ways to overcome them. Two major strategies are preoperative briefings and team training. A new study from Baylor University documents that team training and briefings can change the way OR teams perceive their communication (related article). Briefings also improved antibiotic and deep-vein thrombosis prophylaxis.

Where are the breakdowns?

For 7 years, Lorelei Lingard, PhD, of the University of Toronto has been conducting observational studies in ORs.

“We have been trying to answer the question, ‘What exactly does OR communication look like?’” Lingard says.

It’s often assumed communication is poor, but that hadn’t been formally studied.

In 2004, Lingard and her group reported on their observation and analysis of communication during 48 general and vascular surgery procedures. Of 421 events observed, nearly one-third—31%—of clinically relevant exchanges were classified as failures. About one-third of those had observable negative outcomes including delays, inefficiency, and team tension.

The failures boiled down to 4 problems, Lingard told OR Manager:

• Content: The content was inaccurate or incomplete.
• Timing: Communications were too late to be maximally effective or acted on proactively.
• Purpose: Someone asked a question, and it wasn’t answered. Issues were left unresolved until the point of urgency.
• Inclusiveness: Key individuals were excluded from discussions or decisions. For example, a circulating nurse and anesthesiologist position a patient without the surgeon present. When the surgeon arrives, he wants the patient positioned differently, and the work must be redone.

Could a team checklist help?

Other safety-conscious industries like aviation use checklists to build team communication and improve safety.

Could a team checklist help improve communication in the OR? Different than the usual preop checklist, a team checklist guides a discussion among key team members—nurse, scrub person, surgeon, and anesthesia provider—right before the procedure.

Lingard and her group are experimenting to see if a team checklist is feasible. (See illustration.) Are team members willing to incorporate it into their work flow? How would it be used by different team members?

In a 2005 report, they described a pilot-test of a checklist used before 18 vascular procedures. They found teams could indeed change their practice, and there was “strong consensus” that the benefits were worth some inconvenience.

Could a team checklist help improve communication in the OR? Different than the usual preop checklist, a team checklist guides a discussion among key team members—nurse, scrub person, surgeon, and anesthesia provider—right before the procedure.

Lingard and her group are experimenting to see if a team checklist is feasible. (See illustration.) Are team members willing to incorporate it into their work flow? How would it be used by different team members?

In a 2005 report, they described a pilot-test of a checklist used before 18 vascular procedures. They found teams could indeed change their practice, and there was “strong consensus” that the benefits were worth some inconvenience.

Though preliminary, there was “compelling evidence” that the brief preop communication may affect safety. In more than half the cases, the checklist

Preoperative team checklist

Attendance for completion of checklist
At least one senior responsible representative from each profession should be present.

Anesthesia: ☐ Staff ☐ Fellow ☐ Senior resident ☐ Junior resident
Nursing: ☐ Staff ☐ Student ☐ Senior resident ☐ Junior resident
Surgery: ☐ Staff ☐ Fellow ☐ Senior resident ☐ Junior resident

Patient information
☐ Spoken language
☐ Family/visitor location
☐ Diagnosis
☐ History
  • Medical
  • Surgical
  • Anesthetic
☐ ASA status
☐ Medications given/held
☐ Allergies
☐ Tests
  • Images
  • Bloodwork
  • ECG
☐ Preoperative consultations
☐ Other considerations
  • Cognitive
  • Psychological
  • Special requests

Operative issues
☐ Procedure
☐ Operative plan
  • Description of procedure
  • Side of surgery
  • Intraoperative testing and pathology specimens
  • “Go-ahead likelihood”
  • Estimated duration
☐ Informed consent
☐ OR team
  • Experience with procedure
  • Students
☐ Visitors to the OR
☐ Operative medications
  • Antibiotics
  • Anticoagulants
☐ Anesthesia requirements
  • Airway
  • General or local
  • Invasive monitoring
  • Temperature maintenance (eg, warming blankets)
  • Regional block (eg, epidural)
☐ Blood products
  • Crossed and typed?
  • Grouped and reserved?
☐ Special instruments and equipment
  • Retractor
  • Laparoscopic
  • Cell Saver
  • Headlights
  • Recovery location


March 2006 OR Manager Vol 22, No 3
Nominate OR Manager of Year

Each year at the Managing Today’s OR Suite conference, a manager or director is named OR Manager of the Year.

This year’s conference will be Nov 8 to 10 in Orlando, Fla.

The OR Manager of the Year will receive an expense-paid trip to the meeting, including airfare, hotel, meals, and registration.

In recognizing an individual manager, the award honors all OR managers for their important roles. It is a way of celebrating nursing management in surgical services.

Readers of OR Manager are invited to nominate a manager for the award. Simply write a letter of about 300 words describing what makes the manager deserving of the award.

Send the letter to OR Manager, Inc, OR Manager of the Year Award, PO Box 5303, Santa Fe, NM 87502-5303. The deadline for entries is July 1.

Nominations are judged by the OR Manager advisory board. ❖

A conference brochure will be in the April issue. The brochure and registration information also will be available at www.ormanager.com.

Promote confirmation of details such as patient’s allergies and availability of blood products.

The checklist discussion took 1 to 6 minutes (average 3.5 minutes) and most often was conducted in the OR before the patient’s arrival.

The researchers have completed a larger study in general surgery, which has been submitted for publication. The project is being expanded to 2 hospitals in Toronto with a plan to add 2 more.

Implementing a preop checklist

For those who want to implement a team checklist, Lingard says 2 major questions need to be answered:

• When will the checklist discussion take place?

“By far, the biggest challenge was just to get surgery, nursing, and anesthesia to alter their preop workflow so they could come together for the checklist,” she says.

Because the team needs to be present for the required pause right before the procedure to verify the surgical site, this seems like a logical time. But Lingard’s group encourages holding the briefing earlier, ideally before the patient is intubated, because there is more time to identify and resolve any issues that arise. That is more difficult to achieve because the surgeon may not have arrived.

• Who will be responsible for initiating the checklist?

Someone needs to make sure the checklist discussion is started before each case. At the University of Toronto, the surgeon is responsible.

“Don’t assume it’s going to be nursing—I can’t stress that enough,” Lingard says. “It is too easy for this to get added to nursing’s to-do list.” Nursing may not be in a position to call the surgeon to come to the OR to do the checklist.

At the University of Toronto, surgeons involved in Lingard’s research were able to help “sell” the project to their colleagues. The researchers are still exploring how to achieve buy-in for the long term.

Depending on the organization’s culture, it could be the anesthesia providers or nurses who take the lead, she notes.

“You have to get the leaders of the groups together and talk to each other: ‘Who is going to carry the ball?’” ❖

References


Team communication

Tools for improving OR communication

Other resources for strengthening teamwork and communication:

Institute for Healthcare Improvement


Kaiser Permanente


“Preflight checklist” builds safety culture, reduces nurse turnover


Safety Attitude Questionnaire and Safety Climate Survey

University of Texas, Center of Excellence for Patient Safety. These tools have been used at hundreds of hospitals. An OR version is available. Information available at www.uth.tmc.edu/schools/med/med/patient_safety/survey&tools.htm

Continued from page 17

Promoted confirmation of details such as patient’s allergies and availability of blood products.

The checklist discussion took 1 to 6 minutes (average 3.5 minutes) and most often was conducted in the OR before the patient’s arrival.

The researchers have completed a larger study in general surgery, which has been submitted for publication. The
A two-day conference plus all-day preconference seminars for OR professionals concerned with the business management of the OR.

General sessions and breakouts will focus on:

- OR Efficiencies
- Materials Management
- OR Design and Construction
- Cost Management

Find the brochure and online registration at www.ormanager.com
Communication scores for surgeons and anesthesiologists improved after team training and preoperative briefings, a new study shows.

Researchers from the Baylor College of Medicine and Michael E. DeBakey Veterans Affairs Medical Center in Houston started the study by measuring how anesthesiologists, nurses, and surgeons perceived team communication. Nurses’ perceptions were in the mid range, but there was a wide gap between the anesthesiologists and surgeons.

Team training was then offered to the entire surgical services staff.

“We got buy-in from all of the surgical services and shut down the ORs for one full day for the training,” says Samir Awad, MD, a general surgeon who led the study. The mandatory training was conducted by the VA National Center for Patient Safety (www.patientsafety.gov).

After the training, a change team was created to implement the briefings. “Basically, we brainstormed on what would be the most important issues to discuss,” says Dr Awad, who led the group. “Then we made a checklist like an airline pilot would use before takeoff” (sidebar).

One of the most difficult issues was when to do the briefing. The change team decided it should be done in the OR at the same time as the timeout for surgical site verification.

“We have empowered everyone to make sure it happens—anyone can initiate it. The nurse has most often been the leader,” Dr Awad says.

The surgeon and anesthesiologist are paged as the patient is taken to the OR, and the team meets in the OR. The checklist starts with the timeout. Then team members introduce themselves. “We are on a first-name basis—no more Dr So and So,” says Dr Awad. Each OR has a white board where names of all team members are written. The briefing continues with team members reviewing specific needs for the procedure.

Two months after the team training, perceptions were measured again. Scores improved significantly for anesthesiologists and surgeons; scores remained about the same for OR nurses.

Care improves

The briefings also helped improve care. More patients received prophylactic antibiotics on time and received deep-vein thrombosis prophylaxis before induction.

What’s needed to get others on board?

“The main reason you embark on this is to improve patient safety. You use that as a common theme to achieve buy-in,” Dr Awad says.

“Identify your champions. Start with a change team, and pilot it first. If there’s enthusiasm from the change team, as there was at our hospital, it spreads. Then everyone wants to participate.”

He adds, “I will tell you, personally, there is camaraderie, an atmosphere of cooperation, and a new feeling you get in the OR after the briefing process, even though there are people you have not met before.”

Reference


Preoperative briefing guide

1. Timeout
   - Patient name
   - Procedure
   - Site verification
   - Laterality

2. Roll call
   - Staff surgeon
   - Anesthesiologist
   - Nurse
   - Scrub person

3. Anticipated problems

4. Documentation
   - Consent
   - History and physical within 30 days
   - Staff preoperative note

5. Case discussion
   - Anesthesia plans/concerns
   - Allergies
   - Intravenous antibiotics
   - Position
   - Sequential compression device
   - Required instrumentation
   - Special equipment
   - Blood
   - Length of procedure
   - Postoperative disposition
   - Precautions
   - Consensus on plan and site

Please see the ad for ADVANCED STERILIZATION PRODUCTS in the OR Manager print version.
Managing people

A positive approach to negative people

Almost every surgical department has at least one—the person who finds faults in most everyone and everything. The “negaholic” gossips, complains, and discounts new ideas—dragging down unit morale and effectiveness.

Tim Porter-O’Grady, RN, EdD, CS, CNAA, FAAN, an international expert in conflict issues, governance, leadership, and health systems futures, suggests a 3-part strategy for nursing leaders to work effectively with the negative people on their staff.

“Your plan needs to be rational, logical, and long term,” Porter-O’Grady says. “A lot of managers know the negaholic causes problems but wait until a flare-up occurs to react rather than act.”

1. Determine the behavior gap

A manager’s first job in dealing with negative staff is to seek out the root cause of their destructive behavior.

“The more specific you can become in identifying the source of the individual’s behavior, the more successful you will be in effecting change,” Porter-O’Grady says.

He believes there are 3 primary reasons for the negaholic’s attitude and actions:
1. Unresolved personal problems the person brings to work.
2. A past work experience, such as a broken promise from management or loss of faith in the organization, that changed the person’s dynamic from hopeful and positive to dark and pointless. “The negaholic thinks, ‘If I can’t be successful, why should anyone else be?’” Porter-O’Grady says.
3. Job dissatisfaction. “The person may just be mismatched for the job,” he says. “It’s amazing how many people will say, ‘I didn’t realize how unhappy I was until I changed positions.’

The leader may need to be the catalyst to make that happen.”

To analyze the gap between acceptable and unacceptable behavior, Porter-O’Grady suggests meeting with the person privately to review situations where the person behaved negatively. Ask what it was about the situation that triggered the inappropriate response or made the person unhappy or angry.

“Get them to focus on the driving force underlying their behavior,” Porter-O’Grady says.

Managers also need to look at themselves and whether they’ve allowed the behavior to persist.

Often the negaholic’s behavior got bad because it was never confronted early,” he says. “It became a successful way of getting a desired outcome.”

2. Set behavioral expectations

The next step is removing the opportunity for this behavior to be successful by laying out expectations and parameters of acceptable behavior, Porter-O’Grady says.

“You need to be willing to have some constructive confrontations with this person,” he says. “This is the tough-love part of management where managers tend to pull back. As a leader, you’ve got to be clear about and define what normative behavior is, then hold your staff accountable.”

Managers also need to practice self-restraint in their own behavior and not react in the same way the negaholic is reacting.

“A good problem solver always stays outside the circle and operates from that vantage point,” he says.

Porter-O’Grady recommends the following script for the manager to say to staff when setting behavioral expectations. The manager can instruct staff to:

• Note your feelings. Tell people how you feel—don’t act it out. Say, “I feel nervous, I feel pressure, I feel upset, I feel discounted.”
• Raise questions instead of denying the value of other people’s suggestions.
• Share your thoughts, not your judgments. For instance, when responding to someone’s idea, begin with, “I think,” “I feel,” “I need,” or “I want,” rather than “I agree,” “I disagree,” “I like,” or “I don’t like.”

• Make your contribution to a discussion, then hold back from making another contribution until at least 3 other people have shared their thoughts and feelings. “Negaholics tend to hog discussions,” Porter-O’Grady says. “It’s important to remove them from being the center of attention.”

• Count to 10 when you feel your temperature rising before you react. After you count to 10, take a deep breath, and then respond appropriately.

Defining consequences

To define the consequences of the negaholic’s behavior, Porter-O’Grady suggests this scripting:

“This behavior cannot continue and affects patient care because:

• it has an impact on our ability to solve problems
• it impedes our ability to relate and communicate well with each other
• it undermines our effectiveness and decision making
• it alienates you from your peers and affects your relationships with the team
• it makes others angry
• it shifts our focus from the issue to you—you become the problem instead of the problem on the table.”

Negaholics often try to deflect the focus from themselves to others. “You need to be specific and clear because the negaholic is a smart character,” he says.

For instance, if the negaholic tries to lay blame elsewhere, he recommends that the manager says, “This conversation today is about you. It’s not about Nancy, Joe, or Sharon. If I need to deal with Nancy, Joe, or Sharon, I commit to do that. In addition, your behavior should not be predicated on someone else’s behavior.”

“Don’t let them shift the focus off themselves,” he says. “That’s what gets managers lost 90% of the time. Stay focused, stay on the individual, and

Continued on page 26
Nineteenth Annual

Managing Today’s OR Suite

The Walt Disney World® Swan and Dolphin, Orlando

November 8 to 10, 2006

The premier conference on OR management
Please see the ad for
SKYTRON INC.
in the OR Manager print version.
How well do patients understand the procedure about to be performed on them, especially if they have limited English proficiency? The University of Virginia (UVa) Medical Center in Charlottesville, which treats a large number of illiterate or non-English speaking patients, already had been addressing patient rights related to informed consent. But in the late 1990s, it also realized informed consent had a financial impact.

“We were losing millions of dollars a year because of cancelled procedures,” says anesthesiologist Claudette Dalton, MD. “When we looked at why surgeries were delayed or cancelled, it was almost always because the patient didn’t understand the preop instructions.”

Dr Dalton has been medical director of the hospital’s Preanesthesia Evaluation and Testing Center (PETC) since 1997. When she made the connection between the cancellation rate and revenue, she introduced a “teach-back” protocol with the anesthesia residents and preoperative nurses. For every piece of information patients need to understand—from the type of procedure to postop medications—patients must repeat back the information in their own words to the PETC staff. In 2 months, the cancellation rate plummeted to 0.8%.

“Never in my wildest dreams did I think a problem could be solved so easily,” Dr Dalton says. “Teach-back works. It’s like a magic elixir for informed consent.”

Will it take too long?

Dr Dalton says the PETC staff at first thought it would take too much time to have patients repeat back their understanding of every instruction.

“We’re the busiest clinic in the hospital,” she says. “We were afraid it would slow us down to the point of being non-functional. But my clinic is proof that teach-back doesn’t slow you down.”

The key to its success is to perform teach-back routinely. “We treat everyone in our clinic the same way, whether they are a professor or a seasonal migrant worker,” she says. “We speak slowly and simply. Every patient has to repeat back the information the nurse or resident just gave them.”

For instance, nurses will ask patients, “When you get home today, what surgery will you tell your wife you are going to have? What can you eat before surgery? How long do you need to not eat before surgery? How long will you be home from work?”

“It’s so important to go over procedures and instructions verbally and in simple English,” Dr Dalton says. “The best way to know if patients understand you is to have them tell you what you just said.”

Talking the same language

Dr Dalton says a large part of teaching physicians about informed consent is convincing them to speak at the patient’s level of understanding.

“All doctors think they speak in simple terms,” she says. “But most of us use medical terms patients can’t understand.”

More than 63% of the patient population at UVa Medical Center have literacy issues; 33% are illiterate and another 30% don’t speak English or are deaf (a school for the deaf is nearby).

UVa Medical Center relies on interpreters to translate the surgeon’s explanations and informed consent documents. At times, the medical interpreter needs to encourage the physicians to explain the procedures in simpler terms, says James McGowan, DHA, UVa medical center administrator, who oversees surgical services.

“The interpreter usually is the one who realizes the patient doesn’t understand the surgeon and has to help the surgeon talk in more common language,” McGowan says.

UVa Medical Center is developing a simpler version of the informed consent document that meets legal requirements. The hospital keeps the longer legal document, which is written at a college-junior level, and the patient takes a summary to review at home. A phone number is printed on the summary for the patient to call with questions.

“We have an obligation to find the words that have the right meaning to the patient,” McGowan says. “This gives them another chance to interpret what is going to happen surgically.”

Continued on page 26

Do your patients understand?

Studies show that even after patients agree to care or receive it:

• 18% to 45% are unable to recall the major risks of surgery
• many cannot answer basic questions about services or procedures they agreed to have
• 44% don’t know the exact nature of their operation
• 60% to 69% don’t read their consent forms
• 60% do not understand their consent forms even though they have signed them.

Managing people

Addressing gossip head on

Gossip is one of the greatest detractors to staff morale. David Maxfield, director of research at VitalSmarts, a company that studies and incorporates best practices into management, suggests dealing with gossipers in a 3-stage approach described in Crucial Conversations (McGraw-Hill 2004), the business bestseller for which he was lead researcher.

“This kind of problem is rarely addressed head-on, and it should be. Instead, what most people do is counter gossip with gossip,” Maxfield says. The 3 steps are:

1. Work on yourself
   Decide what the real problem is and what may motivate the gossipper.

2. Create safety
   “We typically fail in creating safety because, to be honest, we don’t care about the other person’s interests, and we don’t respect him or her,” Maxfield says.
   “When we speak up, the other person senses we are there for our own selfish interests, feels unsafe, and becomes defensive. Defensiveness is a safety problem.”

   To counter defensiveness and relay positive intentions and respect for the other person, Maxfield suggests saying: “May I talk with you about a concern I’ve got? My reason for bringing it up is that I want to make sure this OR stays a fun and effective place to work. I don’t want you to think this is too big of a deal. I enjoy working with you, and you’re a valuable contributor here in the OR. I want to talk about gossiping.”

3. Move to action
   After the confrontation, the manager can say, “I’m glad you’re on board with this. Of course, we all talk about everything from time to time, and it can slip into gossip. If you see me start to make that slide, please give me the eye or tap me on the shoulder, and I’d like to be able to remind you, too. OK?”


   David Maxfield will present an all-day seminar on Wednesday, Nov 8, during the Managing Today’s OR Suite conference Nov 8 to 10 in Orlando, Fla.

Continued from page 22

allow no externalization, blame, or side conversations to infiltrate the conversation.”

3. Facilitate behavior change
   The final step is defining action steps negative staff members need to take and commitments they need to make to change their behavior.
   The first step, where you get a sense of why the person is acting out, lays the groundwork, Porter-O’Grady says.
   “About 70% of the time, if you have been fair, consistent, direct, and specific in your approach in helping them identify the root cause of their behavior, they usually can make the necessary adjustments,” he says.
   For instance, the person might disclose she feels fat and ugly and unhappy with her life. In this case, the leader can help her identify steps she can take to deal with her issues.

   “Remember, you are the leader, not the therapist. You are not their help, but you can help them get help,” Porter-O’Grady says. Other scripting that can facilitate change includes:
   • “What can we do to help you deal with this, so it doesn’t become your way of playing in the world?”
   • “What is the next step we need to take?”
   • “What can I do to facilitate this next step?”
   • “How will we know this step is taken?”
   There still are the 30% who have toughened in the negative role and are so broken they have no interest in a more positive approach to living and working. These people usually end up on a disciplinary pathway, Porter-O’Grady says.
   “With the negaholic, you should begin with the possible and the potential,” he says. “The reason you resort to discipline is because you have failed at re-energizing or reconnecting them to their stifled creative energy and to their role in the community.”

   —Leslie Flowers

Leslie Flowers is a freelance writer in Indianapolis.

Tim Porter-O’Grady will present an all-day seminar on Leadership in an Evidence-Based World and breakout sessions on “negaholics” at the Managing Today’s OR Suite conference Nov 8 to 10 in Orlando, Fla. A conference brochure will be in the April OR Manager.

Informed consent

Continued from page 25

A patient’s understanding of an operation is checked with teach-back at 3 points: in the surgical clinic, in the PETC, and on the day of surgery.

Elise Brigham, RN, an OR nurse, developed an online training module to teach UVa surgical residents how to obtain informed consent effectively.

“It’s much rarer now for patients to get to the surgical admission unit and not already understand their procedures,” she says.

The next step is to institutionalize teach-back throughout the UVa system so it is used every time consent is obtained, Dr Dalton says. “That’s a big job.”

Ethical standard of care

Dr Dalton adds that in addition to being a legal requirement, informed consent is an essential safety measure—similar to verification of the right person, procedure, and side, it is the ethical standard of care.

“You must ensure patients understand what you are doing,” she says. “If they don’t, the surgery could be considered by the courts as assault and battery.”

The National Quality Forum (NQF) has a user’s guide to help health professionals carry out teach-back and other recommendations, including having consent forms written in simple sentences in the patient’s primary language and engaging the patient in a dialog about the procedure.

   —Leslie Flowers

The National Quality Forum’s user’s guide on informed consent is at www.qualityforum.org.
Please see the ad for 3M HEALTHCARE in the OR Manager print version.
The OR director is a key player in any project to build or renovate new surgical facilities.

“The director is the link with the clinical staff, the physicians, and the design team,” says Lynne Shira, RN, BSN, senior associate, NBBJ architects, Seattle, and a former OR director.

An all-day seminar and 3 breakout sessions at the OR Business Management Conference May 10 to 12 in Austin, Tex, can help directors prepare for this demanding but creative role.

Preconference seminar

Building a New OR Suite: The Design Phase

During the design phase, the team needs to plan space for procedures, equipment, and technology as well the flow of patients and supplies. This seminar will take the audience through each step of the design process and outline the role of the OR director.

“We’ll provide practical tools for staying organized and learning to think like an architect does,” says Shira, one of the presenters.

Attendees will learn what’s needed to make a business case for a new facility, using as an example the new 10-OR orthopedic hospital being designed for Swedish Medical Center, Seattle. They’ll be able to follow the design process for the new hospital, including the pre-design, schematic, and design development phases.

Speakers include Shira; Kristina Ryhn, principal with NBBJ, and Swedish executives Kate Rogers, RN, MSN, CNOR, executive director of perioperative services, and Heidi Aylsworth, MBA, senior business associate.

Breakout sessions

OR Design and Construction: Key Planning Principles

The session will cover key elements needed to start a project and 5 ways to keep a project moving smoothly. Attendees will learn the value of a PERT chart that includes the critical path, timeline, and responsibilities for the project.

Many of the decisions that come early in the project require the OR team’s input, including the OR layout, ceiling-mounted booms, and equipment they will hold, says the speaker, Daniel Beney, a medical planner and engineer for Harley Ellis Devereaux, Southfield, Mich.

The firm served as architect and engineer for a major addition to William Beaumont Hospital, Royal Oak, Mich, which included 16 new orthopedic and neuro ORs with booms, medical columns, and information and communication systems. Beaumont has one of the nation’s largest surgical volumes, performing more than 50,000 procedures a year.

Visualization and Mockups for OR Design and Construction

A floor plan means much more when the project team can see it in 3 dimensions. This session will describe how virtual technology can be used to mock up schematic designs for rooms. The speaker will also discuss when a physical mockup is necessary and what should be included, including the timing, communication, and a questionnaire for the project members.

The speaker, Zigmund Rubel, is a principal with Anshen + Allen Architects, San Francisco. Among the firm’s projects are expansion and renovation of the Norris Cancer Hospital, Los Angeles; Intermountain Medical Center, Salt Lake City; and PeaceHealth Sacred Heart Medical Center, Eugene, Ore.

When the OR is the Patient: Successful Strategies for Renovation and Expansion

The outdated OR suite at St Vincent’s Medical Center, Jacksonville, Fla, underwent a 30,000-square foot renovation and expansion to meet needs of a growing patient base. The speakers will cover the collaboration needed to carry out St Vincent’s vision, address space and communication deficiencies, and allow flexibility for the future. They will also discuss maintaining operations during construction.

Presenters are Steve Gartman, associate vice president, Cannon Design, an architectural, engineering, and design firm, and Phyllis Pease, RN, nurse manager at St Vincent’s. Cannon’s clients include BJC Health Systems, St Louis; Brigham & Women’s Hospital, Boston; and Kaiser Permanente.

Download the conference brochure and register online at www.ormanager.com.
Please see the ad for 3M HEALTHCARE in the OR Manager print version.
Please see the ad for
DUPONT
in the OR Manager print version.
A call for better reprocessing instructions

Extended sterilization cycles. Different cycles for implants and instruments in the same tray. Vague instructions that say “follow your usual procedure.”

These are issues central service (CS) professionals say they’re having with some device manufacturers.

“It can be almost impossible to get the manufacturers to provide sufficient instructions,” says Anne Cofield of Cofiel Consulting Services, a CS consultant.

In an informal online survey last year, the International Association of Healthcare Central Service Materiel Management (IAHCSSM) found lack of reprocessing instructions was the chief complaint.

Some manufacturers specify extended cycles beyond those that health care facilities typically use. For example, instructions for devices made in Europe where variant Creutzfeldt-Jakob disease (vCJD) is a concern may require a prevacuum cycle of 134 C (274 F) for 18 minutes, intended to inactivate prions, without other options.

Orthopedic companies and some other manufacturers call for prolonged prevacuum cycles of 8, 10, or 20 minutes or longer. The cycles are based on testing that shows a set such as a big orthopedic tray needs a longer cycle to demonstrate sterility assurance.

Difficulties for CS

These situations create difficulties for CS departments. They may choose to ignore the instructions and use their routine cycles, risking sterilization failure. Or they may reprogram their sterilizers to match the extended cycle but then use the sterilization indicators intended for routine cycles.

“Errors are possible if a sterilizer has to be reset or reprogrammed,” says Natalie Lind, CRCST, CHL, education director for IAHCSMM. Plus, an extended cycle can tie up a sterilizer. “If you have only 2 or 3 sterilizers, and you have 2 sets needing extended cycles, everything else has to wait,” she says.

Nonstandard cycles pose a potential risk to patients because there are not appropriate process monitors, including biological and chemical indicators and challenge packs for the cycles, notes a user alert from Canada.

Require detailed instructions before purchasing.

The alert recommends that users require detailed information from manufacturers before acquiring any devices—including those loaned or leased. For existing sets, the alert suggests conducting limited testing by placing biological indicators in various locations in the set before it is used for the first time to ensure steam penetration is achieved. If any biological indicators (BIs) fail (ie, show growth), break down the tray into smaller sets and retest. If BI failure still occurs, remove the set from use and file a report with the manufacturer, the alert suggests.

FDA requires instructions

The Food and Drug Administration (FDA) requires manufacturers to include reprocessing instructions when they submit device applications for review. An FDA guidance states: “Manufacturers are responsible for supporting the claim of reuse with adequate labeling; the labeling must provide sufficient instructions on how to prepare the device for the next patient, and the manufacturer is responsible for the documentation of tests which show the instructions are adequate and can be reasonably executed by the user.” (Labeling Reusable Medical Devices for Reprocessing in Healthcare Facilities, April 1996. www.fda.gov/cdrh/ode/198.pdf)

The Association for the Advancement of Medical Instrumentation (AAMI) has 2 documents that can help device companies develop instructions that are feasible in health care facilities:

• AAMI TIR12:2004 gives guidance on performing validation studies for reprocessing instruments.

How OR managers can help

OR managers and directors can assist by insisting that manufacturers provide instructions hospitals can follow. Here are ways to help:

• Use buying power. Insist on adequate cleaning and reprocessing instructions when making the decision to purchase a new device, Lind advises. Include adequate instructions as a criterion on the product evaluation form. Develop a checklist for evaluating the instructions. Ask how any extended cycle should be monitored to assure sterility. AAMI TIR12 and ST81 provide guidance on what to look for.
• Insist on receiving reprocessing instructions from sales reps. “Don’t let them tell you the company doesn’t have instructions—they do. It’s required by the FDA,” says Lind.
• If instructions aren’t adequate, file a report with the FDA’s MedWatch program, using Form 3500 at https://www.accessdata.fda.gov/scripts/medwatch/. MedWatch is the way the FDA learns about device-related problems. It takes a volume of reports to make the agency aware of the magnitude of the issue, says Lind. IAHCSMM is in contact with the FDA, and FDA representatives have participated in discussions at its annual conference.
• Urge companies to post cleaning and reprocessing instructions on their web sites. Says Lind: “If instructions were on the Internet, and I got a loaner set in at 5 pm, I could go to the web site and get the instructions. Then I could review them for my own peace of mind.”

Canadian alert

The user alert from Canada titled “Problems with process monitors for extended steam sterilization cycles” is in the OR Manager Toolbox at www.ormanager.com.

The alert illustrates how to place biological indicators in containers to evaluate steam and heat penetration.
Insurance companies are stirring the controversy already boiling between anesthesia and gastrointestinal endoscopy providers over safe administration of propofol (Diprivan) for routine endoscopies.

WellPoint, Inc, the nation’s largest health insurer, announced in December it will no longer pay for anesthesia providers during routine endoscopies. Aetna Inc’s policy is under review, but observers expect the company also to restrict anesthesia services for routine colonoscopies. The Wall Street Journal (Dec 27, 2005) reported that Noridian Administrative Services, an administrator of Medicare benefits in 14 states, restricts reimbursement for anesthesia services during routine colonoscopies.

Who will give propofol?

Who will administer propofol if services of anesthesia providers are not covered? The majority of anesthesiologists and certified registered nurse anesthetists (CRNAs) believe propofol is safest in the hands of trained anesthesia providers. But a growing number of GI physicians are pushing for nurse-administered propofol sedation (NAPS).

“Who will give propofol? Who will administer propofol if services of anesthesia providers are not covered?”

Propofol is preferred by many patients.

Gastroenterology (ACG). He is lead author of a Gastroenterology report (November 2005;129:1384-1391) that documented safe use of NAPS for 37,743 patients.

“Considering the evidence, it’s becoming more difficult to understand the resistance of the anesthesia community,” Dr Rex told OR Manager.

Gastroenterologists and anesthesia providers do agree propofol can be tricky to administer. According to the ACG, propofol is inherently risky because it is a cardiovascular and respiratory depressant. Propofol is short-acting and may require frequent reinforcing doses, causing greater peak levels of sedation. Also, propofol has no reversal drug, so an overdose must be treated with ventilatory and sometimes cardiovascular support.

The American Society of Anesthesiologists (ASA) says propofol’s rapid action and high potency also can make it difficult to reach the intended level of sedation. Propofol can induce an unintended state of general anesthesia within as little as 30 seconds of a single intravenous dose. Also, patients differ widely in their reactions to a standard dose, with a 20-fold variation in the rate of their metabolism.

Patients like propofol

Yet propofol is preferred by many patients, GI physicians, and nurses. A survey of ACG members showed the percentage of GI physicians who use the drug is doubling every 2 years, reaching 25% in 2004.

According to the ACG, propofol has several advantages over alternative sedative agents (benzodiazepines and narcotics) for endoscopic procedures. Propofol induces sedation more rapidly than a midazolam (Versed)-meperidine (Demerol) combination or a midazolam-fentanyl combination. Propofol results in faster recovery and better post-procedure functioning.

“Patients love it because they’re more alert and interactive and not nauseated postprocedure, unlike with other sedatives,” says Helen Rolf, RN, BSN, nurse manager at Green Spring Station Endoscopy in Lutherville, Md. “Patients tell me they would pay for the drug and CRNA out of their own pocket if necessary.”

So will the endoscopy center. Rolf says that if insurance carriers and
Medicare deny coverage for the services of CRNAs who contract with the center to administer and monitor propofol, her endoscopy center will hire them as employees.

“It definitely will be detrimental to our revenue,” she says, “but our physicians are not interested in going back to conscious sedation. Once you go with propofol, you don’t go back.”

Deborah Krohn, RN, JD, an endoscopy nurse at Johns Hopkins and an attorney in private practice in Towson, Md, has had several colonoscopies, including one performed with CRNA-administered propofol.

“I thought propofol was fabulous,” Krohn says. “In terms of physical comfort, it was tough to distinguish between propofol and Versed and fentanyl, but I was definitely more clearheaded afterward with propofol.

Yet Krohn is not a NAPS advocate.

“I have profound respect for the integrity of patients’ airways, and I think propofol compromises those,” she says. “Nurses who are not CRNA-trained are not prepared to adequately handle airway complications. I do not think we serve patients well to have nurses with 2 weeks of training do the job of nurse anesthetists who have had years of focused training and clinical experience.”

Data on safety

Dr Rex and many, but not all, of his GI colleagues disagree. He cites data showing more than 200,000 patients have received propofol safely by nonanesthesiologists.

In March 2004 the ACG, the American
Please see the ad for SURGICAL INFORMATION SYSTEMS in the OR Manager print version.
Gastroenterological Association, and the American Society of Gastrointestinal Endoscopy issued a joint statement supporting use of propofol by adequately trained nonanesthesiologists and declaring that routine assistance of an anesthesiologist/anesthetist for average-risk patients undergoing standard upper and lower endoscopic procedures is not warranted.

WellPoint, Inc, spokesperson Laura Stallman says the company’s new clinical guideline for anesthesia services for routine GI procedures was based largely on this joint recommendation.

“For the majority of Americans, moderate sedation is effective and well tolerated,” Stallman says. “Our clinical guideline does support use of medications such as propofol during a colonoscopy when their use is medically appropriate, for example, in the case of a patient who is considered high risk, an elderly adult, or a patient who previously did not tolerate the sedatives used most frequently during a routine colonoscopy.”

If anesthesia services are not covered or are unavailable in areas with anesthesiologist and CRNA shortages, and GI physicians want to use propofol, 2 questions emerge for endoscopy nurses in the ambulatory setting: What will be required of them, and what is their liability?

NAPS training for nurses

Jo Harbaugh, RN, BS, CGRN, past president of the Society of Gastroenterology Nurses and Associates, says she is concerned about NAPS because rescuing patients from deep sedation using advanced airway management techniques has not been the customary practice of nurses in freestanding GI centers and office settings. Also, anesthesiologists and CRNAs are not always available on site.

“NAPS could change the landscape of ambulatory nursing,” Harbaugh says. “Right now, the vast majority of ASC nurses do not have the skills to independently manage a patient going into deep sedation or general anesthesia. Certainly most can learn, but some will not be comfortable with anesthesia monitoring or patient rescue.”

Harbaugh also is concerned that NAPS nurses will not maintain their advanced airway management and rescue skills because the skills may be used infrequently.

“Advanced airway management is not something you want to use often,” she says. “However, if you don’t use it, you lose your skills. I believe a 6-month refresher course for NAPS would be essential.”

Harbaugh would also like to see a universal training and certification NAPS protocol that would ensure nurses in all settings receive the same training and follow the same safety protocols.

“Teaching hospitals always have anesthesia and backup immediately available, but that is not the case in GI ASCs and physician offices,” she says. “We have to ensure everyone is practicing the same standard of care.”

Roadblock to NAPS

A roadblock to NAPS is the propofol package insert, which states: “For general anesthesia or monitored anesthesia care (MAC) sedation, Diprivan Injectable Emulsion should be administered only by persons trained in the administration of general anesthesia (italics added) and not involved in the surgical or diagnostic procedure.”

For the anesthesia community, “persons trained in the administration of general anesthesia” translates to anesthesiologists, CRNAs, or anesthesia assistants, says Jeffrey Apfelbaum, MD, ASA first vice president.

“The principal concern of ASA members is the safety of our patients,” he says. “The safety concerns that led the FDA (Food and Drug Administration) to support this warning are still valid, and the warning should remain in place. Propofol is a potent anesthetic that typically produces varying and often unpredictable levels of sedation, sometimes unintentionally progressing to general anesthesia with significant respiratory and hemodynamic compromise.”

GI society petitions FDA

In June, the ACG petitioned the FDA to change AstraZeneca’s package insert for propofol by removing the warning so other qualified medical professionals can deliver the sedative. The petition cites numerous studies and reports it says demonstrate the safety of NAPS, argues that the current label imposes unnecessary restrictions on gastroenterologists, and asserts that its removal will reduce costs by eliminating the need for anesthesiologists or nurse anesthetists in routine endoscopic procedures.

The ASA countered the ACG petition with these arguments:

• Removing the warning label will compromise patient safety because nurses or other staff not trained and experienced in the administration of general anesthesia may not be able to restore breathing or normal cardiac activity in time “to prevent a catastrophe.”

• The ACG petition does not provide legal grounds to make the warning change but “is simply a summary of numerous published scientific articles designed to support an economic objective.”

• Removing the warning label would encourage its use in nonregulated settings, such as doctor’s offices, or in isolated settings where there is no anesthesia backup. Many of the GI reports cited in the FDA petition take place in controlled environments with anesthesia support readily available.

At press time, the FDA was still reviewing the petition and comments, says spokesperson Karen Mahoney. In general, FDA reviews clinical data and other information to determine if a label revision is needed and works with the drug manufacturer to establish appropriate language.
Continued from page 35

The majority of comments submitted to the FDA have opposed the ACG’s position, including comments from members of Congress, says Valerie Bomberger, AstraZeneca spokesperson.

Nurses’ liability

Twenty-three state nursing practice acts expressly restrict propofol sedation to those trained to administer general anesthesia. Several boards are reviewing their positions (page 33).

Krohn says nurses who deliver propofol are in a vulnerable position. First, they could be sued for malpractice for delivering the drug off label contrary to the manufacturer’s warning and in opposition to the well-publicized position of anesthesia providers. Second, they could be at risk for discipline by their state boards of nursing if NAPS is considered beyond the scope of practice for RNs.

NAPS in practice

Despite the off-label liability risk, NAPS has been practiced in the outpatient endoscopy unit at IU Medical Center for 5 years. Attorneys for Clarian Health, owner of the medical center, reviewed the Indiana Nurse Practice Act and found it vague on the issue.

Dr Rex consulted with IU’s anesthesia department to develop the GI unit’s protocol for NAPS. The first physicians and nurses to practice NAPS attended training led by John Walker, MD, at Gastroenterology Associates in Medford, Ore.

Five GI nurses at IU were chosen to be trained in NAPS. Other GI nurses who want to deliver propofol must first administer nonpropofol sedatives for 6 months, receive didactic instruction on propofol sedation, and perform a minimum of 15 NAPS cases with a preceptor.

“The experienced nurses and physicians choose the nurses who deliver propofol carefully,” says Lea Rae Herron-Rice, BSN, RN, CGRN, administrative director of GI services. “Many of them are interested in professional growth and value autonomy.”

IU has a clinical ladder for staff nurses with levels of associate, partner, and senior partner. Nurses who deliver propofol must be at the partner level.

Herron-Rice says the IU anesthesiologists have been so impressed with the endoscopy NAPS training that Clarian Health requires the GI nurses to train staff from any unit that delivers propofol by bolus.

“I think our nurses are courageous to not believe what is written in some package insert,” says Dr Rex. “If nobody has the courage to do the things they feel are right, we’re never going to make any progress.”

Looking at options

Dr Rex notes several potential solutions to the propofol dilemma, including:

- Following the multiple-agent protocol developed by Lawrence Cohen, MD, associate clinical professor of medicine/gastroenterology at Mount Sinai Hospital in New York City. Dr Cohen uses low-dose propofol plus low-dose midazolam and narcotic. This combination maintains patients in moderate sedation with the fast-acting benefits of propofol but without the grogginess or amnesic effects of midazolam and narcotics. Dr Rex uses this protocol almost exclusively for routine upper GI procedures.

- Working with drug companies to develop other sedation options. MGI Pharma is beginning phase III trials of Aquavan Injection, which the company hopes will combine the best qualities of propofol and midazolam—rapid onset and rapid recovery—and may not require monitored anesthesia care. Aquavan could be on the market within 2 years.

- Performing controlled NAPS safety studies and developing a NAPS training protocol with anesthesia colleagues.

“We need to acknowledge the safety concerns of our anesthesia colleagues and engage them in helping us find ways to deliver propofol in a way that meets their standards for safety, keeps healthy the practice of endoscopy, and controls health care costs,” Dr Rex says.

Leslie Flowers is a freelance writer in Indianapolis.
Please see the ad for
SULLIVAN LAKIER GROUP
in the OR Manager print version.

Special limited time offer!
Competencies for Management of the Operating Room
3rd edition

Now available. This classic reference for OR directors and managers has been updated to reflect changes in health care that affect the OR.

- A new competency on patient safety has been added.
- All new articles from OR Manager provide information for achieving the competencies.

You save 20%! Your special price is $54.40 (plus $9.95 for shipping and handling). Offer good until March 31, 2006.

Order now on the OR Manager web site: www.ormanager.com
Or call 800/442-9918
Please see the ad for
ST MARY’S DULUTH CLINIC
in the OR Manager print version.

Please see the ad for
MEDICORP HEALTH SYSTEM
in the OR Manager print version.
Please see the ad for INTEGRATED MEDICAL SYSTEMS in the OR Manager print version.
Meperidine overused in older surgical patients

Many older surgical patients are receiving meperidine (Demerol) when alternatives provide equal or better pain relief with fewer toxic effects, according to the January Archives of Surgery.

Researchers compared use of meperidine in older surgical patients with older medical patients at 2 urban hospitals. At one hospital, 12% of surgical patients received a dose of meperidine compared with 4% of medical patients; at the second hospital, it was 12% and 2%, respectively. Surgical patients also were more likely than medical patients to receive multiple doses of meperidine. Though recommendations advise prescribing meperidine conservatively in older adults, the drug is given to many hospitalized older patients, especially those in surgical services, the report says.


Alcohol-based prep solution likely source of OR fire

Povidone iodine/isopropyl alcohol was the likely fuel for an OR fire in which a 74-year-old woman was severely burned during a tracheostomy, according to a case report. The patient, who had had cardiac surgery 20 days earlier, later died. Evidence indicated the alcohol was not sufficiently dry on the patient’s face, neck, shoulders, and upper chest, and the amount of vapor was substantial. The electrosurgical unit was the likely ignition source.

The authors say the incident reinforces the need to review risk factors for surgical fires, including alcohol-based prep solutions. These solutions should not be allowed to pool and should be allowed to dry completely before draping the patient.


RN supply increases 7.9%

The number of licensed RNs has increased 7.9% since 2000 to about 2.9 million, according to preliminary findings from the 2004 National Sample Survey of Registered Nurses. In other findings:

• 83% were employed in nursing in 2004.
• Slightly more than half were working full time.
• Average earnings of full-time RNs increased 12.8% since 2000.
• The average age of RNs increased to 46.8 from 45.2.

—Health Resources & Services Administration http://bhpr.hrsa.gov/healthworkforce/reports/rnpopulation/preliminaryfindings.htm

Drug used in cardiac surgery can increase risk of kidney failure

The use of apronitinin, an antifibrinolytic agent used to reduce bleeding during cardiac surgery, can increase the risk of kidney failure, heart attacks, and strokes, reports the Jan 26 New England Journal of Medicine.

Researchers urged extreme caution in using apronitinin and suggest using safer and less expensive generic drugs like aminocaproic acid or tranexamic acid unless patients have a history of bleeding. Bayer, which manufactures apronitin under the brand name Trasylol, disputed the findings. Neither aminocaproic acid nor tranexamic acid was associated with an increased risk of renal, cardiac, or cerebral events.