A strategy for gaining control of soaring spinal implant costs

When a Midwestern hospital saw its surgical services costs soar in a national benchmarking study, it started digging and found the reason—escalating spinal implant costs.

“Basically, the vendors had increased their pricing, and we were not on top of it,” notes Mary Conti, RN, the coordinator for clinical resource management at Froedtert Memorial Lutheran Hospital in Milwaukee.

Drawing on financial analysis and quality improvement tools, Froedtert’s managers drilled into their costs, analyzed their processes, and produced reports that enabled them to share objective information with the surgeons. In the process, they discovered some major cultural barriers to cost management. As they began working with the surgeons, the barriers began to come down, and the surgeons have become strong allies in managing costs for these expensive cases.

Here is a step-by-step look at how they regained control over costs in this complex specialty.

Step 1: Analyze costs

Froedtert’s team broke down its lumbar fusion costs using activity-based costing, specifically, the OR Manager Cost Standard. Activity-based costing is an accounting technique that allows an organization to cost out its services based on resources it consumes.

The National Surgical Infection Prevention (SIP) Collaborative gave participants the momentum to make changes in this complex process. Many of the more than 50 hospitals that participated in the project sponsored by the Centers for Medicare and Medicaid Services (CMS) have seen infection rates drop as much as 70% to 100% for some procedures. The work of the year-long national collaborative, which wrapped up in April 2003, is being carried forward at the state level by Medicare’s quality improvement organizations (QIOs), which contract with CMS to improve care for Medicare patients.

The collaborative’s three measures

Continued on page 13
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Managing spinal implant costs has been a tough fiscal challenge for surgical services leaders.

The number of hardware-intensive spinal fusions is increasing faster than the number of laminectomies, a simpler procedure. This may be because surgeons and hospitals are paid more for fusions, the Dec 31 New York Times reports. Almost 90% of lumbar fusions involve hardware, compared with fewer than half in 1996, according to Orthopedic Network News.

Though fees vary widely, several surgeons said Medicare pays about $4,000 for a spinal fusion versus $1,000 for a laminectomy. Hospitals typically collect $16,000 for a fusion, with more for a 360-degree operation, compared with $7,000 for a laminectomy.

Also driving costs are new fusion technologies such as bone morphogenic protein and bone-growth stimulators. Scant research on outcomes means patient benefits are difficult to judge.

Medicare complicates matters by paying more for more complex care, which encourages high-tech treatment.

A leading spine surgeon quoted by the Times said he thinks fewer than half of spinal fusions are appropriate.

With the money involved, it may not be surprising that spinal fusion has been tinged by scandal. The government is investigating whether Medtronic Sofamor Danek, a major dealer of spinal implants, paid illegal kickbacks to surgeons. The company said it would vigorously defend itself.

In November, two sales reps from DePuy Acromed (now DePuy Spine) were arrested for allegedly causing the company to bill Southern California hospitals for $3.5 million in spinal hardware never used in patients (January OR Manager).

Strategies that can help

With these forces in play, controlling implant costs can seem like swimming upstream. But there are strategies that can help. Some are described in this month’s article about Froedtert Memorial Lutheran Hospital.

• Build alliances with physicians. Traditionally, hospitals don’t have much to say about which implants are used—they just write the checks. It takes diplomacy and administrative support to increase the hospital’s influence in these decisions. Froedtert found sharing sound data on per-physician costs and being candid about what the hospital was paying for implant components made a difference in getting surgeons’ support.

• Upgrade information systems. Are your hospital’s systems linked so the finance department can match invoices for spinal implants with implants used in patients? If it doesn’t, this may be a good argument for upgrading.

• Give the OR staff good documentation tools. Including implant catalog numbers on the implant log or billing sheet is a key step in linking implants used to those paid for, Froedtert found.

• Limit sales reps’ roles in the OR. Controlling sales reps’ activities is important for fiscal accountability as well as for patient privacy and safety, as the California cases illustrate. Obviously, the staff should be documenting what implants are used, not the sales rep.

• Insist on evidence on outcomes. Though published research may be lacking, encourage surgeons to track their patient outcomes for spinal implant procedures to determine which technologies make a difference in their practices.

Fiscal accountability for spinal fusion procedures starts in the operating room.

There isn’t much nurses and nurse leaders can do about unnecessary surgery and galloping technology. But they can create systems and tools to help ensure that the technology used is billed for appropriately and that patients are charged accurately. 

—Pat Patterson

The New York Times article is at www.nytimes.com. There is a charge for articles from the archives.
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Total knee surgery has good outcomes

Total knee replacement is a safe and cost-effective treatment that restores mobility and relieves discomfort, according to 20 years of follow-up data. Over 300,000 of the procedures are done each year, with 90% of patients having improvements in their pain, functional status, and quality of life, and 85% of patients are satisfied with the results.

Perioperative mortality is low, at 0.5%, and deep wound infections occur in less than 1% of cases.

But there still is not enough research to answer questions about some infection control measures and prosthesis design, according to a panel convened by the National Institutes of Health. A draft of the panel’s consensus statement was issued Dec 10.

Among highlights of interest to surgical services leaders:

- Factors associated with wound and deep-tissue infection include a diagnosis of rheumatoid arthritis, diabetes, or obesity and use of corticosteroids.
- The surgeon’s and hospital’s total knee replacement volumes have one of the clearest associations with better outcomes. The complication rate is highest for surgeons who perform 12 or fewer operations a year, and complication rates decrease as the annual volume increases. Complication rates are highest in hospitals performing fewer than 25 operations per year, with the rate falling as more operations are performed.
- Loosening of the implant is the main factor in revisions, and proper alignment of the prosthesis is crucial to minimize loosening. Computer navigation may eventually improve alignment of the prosthesis. But the technology is expensive and increases OR time, and the benefits remain unclear.
- Many prosthesis designs are on the market, but their relative merits are unclear. Design features such as use of mobile bearings or designs that spare cruciate ligaments have theoretical advantages, but their durability and success rates appear roughly similar to those of the most common designs.
- There is data to support use of antibiotic-impregnated bone cement, but enthusiasm has been tempered by concerns about its availability, cost, and development of antibiotic-resistant strains of bacteria.
- Some data supports use of ultraclean-air ORs and whole-body exhaust-ventilated suits, but these practices have not been universally adopted “primarily because of the uncertainty of their impact,” the panel said.
- Total knee is considered a high-risk procedure for venous thromboembolism, and measures have been recommended to prevent deep vein thrombosis (DVT). But the vast majority of DVTs are asymptomatic. Recent data demonstrates that detection and treatment of asymptomatic DVTs do not alter the occurrence of symptomatic DVTs or pulmonary embolism after knee replacement.

The panel reported that there is clear evidence of racial, ethnic, and gender disparities in total knee replacements. The reasons are unclear but may be related to physicians’ belief about their patients, limited familiarity with these procedures in minority communities, and patient mistrust of the health care system. The panel called for more research.

There is clear evidence of racial and other disparities.

The draft consensus statement is at http://consensus.nih.gov/
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J&J moves to block counterfeit products

In a move to block counterfeit products, Johnson & Johnson (J&J) asked its wholesalers and distributors to sign an agreement to acquire its products only from J&J.

J&J says those that don’t sign will no longer be able to purchase J&J products as of March 5.

In a Dec 11 letter to 210,000 health professionals, J&J suggested customers ask their distributors to state in writing that J&J products they handle come from J&J-approved distributors or directly from a J&J company. J&J said it will post approved wholesalers and distributors at www.jnjgateway.com, www.ethicon.com, or www.ethiconendo.com

The action is in response to the recent distribution of two counterfeit J&J products, Procrit, a medication to stimulate red blood cell production in patients with severe anemia, and Prolene mesh purportedly from J&J’s Ethicon unit. The 3 x 6 inch flat mesh used to repair hernias and other defects apparently entered the supply chain when some distributors purchased it from the secondary market, according to J&J.

Food and Drug Administration (FDA) testing found some of the counterfeit mesh was not sterile (sidebar).

“If distributors do not buy products direct from the manufacturer, there is no assurance that goods are not counterfeit,” J&J’s letter said.

Distributors react

Not all distributors are enthusiastic. “We agree with the goal to improve patient safety, but we are concerned about the terms and the effect on our customers,” said Cardinal Health spokesperson Donna Gaidamak. Among concerns are that Cardinal would not be able to purchase its own stock back from customers or buy J&J products from secondary distributors such as those owned by women and minorities. She said Cardinal already has its own quality standards for qualifying distributors.

An Owens & Minor spokesperson said the company “fully supports” J&J’s efforts and would work with J&J “to implement those procedures that will further protect the medical-surgical supply chain from the risk of counterfeit products.” But she would not say whether Owens & Minor would sign the J&J agreement.

A call to McKesson was not returned by press time.

What is the secondary market?

OR directors are familiar with the main links in the supply chain—product manufacturers and major distributors. But they may not be familiar with a largely hidden secondary market. The secondary market deals in goods that have been redirected from their original customers. An example is distributors that buy up inventory from a hospital that is going out of business and resell it to others.

Part of this is a “gray market” that acquires brand-name products abroad for a low price, imports them back into the US, and sells them at a lower price than what customers would pay for the same product bought directly from the manufacturer.

This largely unregulated secondary market is a porous layer through which counterfeit products can seep in. Customers may not know resold products have taken a circuitous route and what conditions they were subjected to.

The secondary market in drugs has generated headlines. The FDA has investigated 71 counterfeit drug cases since 1996, resulting in 43 arrests, according to the Associated Press.

The Wall Street Journal reports there is so much selling and reselling of drugs that it is difficult to figure out which wholesalers involved in counterfeit drug cases are innocent, and which ones may have looked the other way. In a step toward further regulation, the FDA issued a report Oct 2 with options for addressing the problem of counterfeit drugs.

Counterfeit medical devices are rare—except for the mesh, and the FDA does not know of any other recent cases.

But good advice for nurses is to be cautious and take a careful look at all products before they use them to make sure the package and the product appear to be intact and in good condition.

Some counterfeit mesh not sterile, FDA says

Some samples of a counterfeit mesh labeled as Ethicon’s Prolene are not sterile, the Food and Drug Administration (FDA) reported Dec 19.

The FDA said it is not aware of a significant increase in infections from the counterfeit product. Preliminary testing also indicated the counterfeit product has a molecular structure similar to other mesh on the market. Testing is continuing. The FDA and Ethicon originally issued an alert on the counterfeit mesh in October. The mesh did not come from Ethicon.

The FDA recommended that health professionals:

- carefully examine all polypropylene mesh products and not use any they suspect of being counterfeit
- contact the distributor if they think they have a counterfeit product in inventory
- monitor patients they suspect have had counterfeit mesh implanted in the same way they would monitor any other patient with a mesh implant.

The FDA did not report how the counterfeit mesh entered the market. Counterfeiting is a criminal activity.

“IT looks like it was produced in a foreign country, and that complicates the investigation,” an FDA spokesman told OR Manager. The FDA said a “significant number” of hospitals across the country received the counterfeit mesh, but it did not have an exact number. He said counterfeit medical devices are “extremely rare.”

The counterfeit mesh is labeled with lot numbers RBE609 (expiration date JAN07) and RJJ130 (expiration date JUL07).

The FDA alert did not involve Ethicon’s Prolene suture products. For more information on identifying the counterfeit mesh, see www.ethicon.com

The FDA’s Dec 19 notice includes information about reporting adverse events to the FDA. The complete notice is at www.fda.gov/cdrh/safety/121903.html
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When medication errors occur in the OR, they are more likely to harm patients than errors in other areas. In 2002, about 10% of med errors in the OR caused patient injury—compared with less than 2% of hospital med errors overall. The findings are from the US Pharmacopeia’s fourth annual report on medication errors in hospitals.

USP drew on 2002 data from MEDMARX, its anonymous national medication-error reporting database. The report includes 192,000 errors submitted voluntarily by 482 hospitals and other health care facilities. More information on the report is at www.usp.org. Patterns for the OR were similar to the 2001 data. Here are some specific results.

**How many drug errors were there in the OR?**
- 621 OR med errors were reported to MEDMARX in 2002.
- Of these, 50 errors were harmful:
  - 1 fatality
  - 1 near-death event
  - 7 cases of temporary harm with hospitalization
  - 41 cases of temporary harm

**What types of errors occur most often?**

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**What types of errors are most likely to cause harm?**

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<td>Prescribing error</td>
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<td>Extra dose</td>
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**What drugs were involved in the most harmful events in the OR?**

- Cefazolin: 8 reports
- Vancuronium: 5 reports

**What were the most common types of harmful OR med errors?**

- Antibiotics were the most likely drug to be omitted.
- Medication allergies were not recognized.
- Patients were given a neuromuscular agent that was confused with an antibiotic, paralyzing patients’ breathing. “This has been a recurrent theme in all of the perioperative areas—the swap of syringes between antibiotics and the paralyzing agent,” says USP’s Rodney Hicks, RN, MSN, ARNP, BC, MPA.
- Patients transferred from the OR to the recovery room received the wrong strength of heparin in the flush port of the arterial line.
- Pediatric patients were given vasoactive drugs but were not kept on pumps when transferred from the OR to the recovery room and received excessive fluids. “We know it is cumbersome to move those pumps, but these patients deserve the titration accuracy of a pump,” Hicks says.

**Case:** In the only fatal case from the OR in the 2002 data, a patient died of digoxin toxicity after confusion over a verbal order. The surgeon who gave a verbal order to the anesthesiologist meant to say 18 mg but mistakenly said 180 mg of digoxin. The anesthesiologist did not pick up on the error. The patient died despite aggressive resuscitation efforts.

**Case:** A patient who was receiving Neo-Synephrine (phenylephrine) for an episode of hypotension and severe bradycardia was positioned with arms tucked. The staff noticed the drug did not seem to be going into the patient even though the IV-line clamp was open. When the arms were untucked, the patient received a bolus of the drug, resulting in severe hypertension. The patient was treated for the hypertension, the case was canceled, and the patient was transferred to the ICU for monitoring and evaluation.

**What steps can ORs take to improve medication safety?**

- Avoid unlabeled medications on the back table. “There have been a lot of cases where products are swapped on the back table, for example, the wrong basin was put out,” says Hicks.
- Label syringes or develop a color-coding system to avoid confusing drugs such as antibiotics and neuromuscular blocking agents.
- Post an erasable board in each OR where the staff can record verbal medication orders and other pertinent information. Writing the order is an extra visual cue that can help avert errors.
- Minimize handoffs. The perioperative arena has more handoffs than most other clinical areas, which raises the opportunity for error.
- Provide laminated cards to aid the staff with weight conversions from pounds to kilograms.
- Revise forms so medication allergies are documented in the same prominent location on all forms used in all perioperative areas. Documenting allergies in a consistent place makes it less likely allergies will be missed.
- Consider having orders for day surgery patients reviewed by a pharmacist. This does not always happen because of abbreviated stays.
Cost management

Spinal fusion implant process map

**Process variables**
- Implant known
  - Yes
  - MD contacted by service coordinator and/or inventory specialist
- No
  - MD contacted by service coordinator and/or inventory specialist

**Outcome parameters (Ys)**
- Physician identifies spinal fusion OR date
- Clinic calls OR to schedule case
- Inventory specialist orders spine implant
- Implant available for surgery
- Implant used in surgery
- Implant billed by finance

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**Goal:** Eliminate unnecessary spinal fusion implant costs

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Continued from page 1

...costs were expensive miscellaneous items such as spinal cages, human allograft tissue, bone morphogenic protein (BMP), and bone growth stimulators.

The hospital estimated that saving 20% on implants for spinal fusion could reduce costs by $500,000. The hospital’s spine volume is 500 to 600 cases a year.

**Step 1: Assess the situation**

Froedtert found the largest cost driver of the supply category, implants, to be by far the greatest share of the cost. Within the vices. Supplies were the resource with the highest costs, notes Cheryl Grandlich, RN, MSN, business and financial coordinator for surgical services. Administrators were willing to back the project because they knew from the benchmarking data that the hospital

**Step 2: Define the problem**

In the analysis, Froedtert found the intraoperative phase of care had by far the highest costs, notes Cheryl Grandlich, RN, MSN, business and financial coordinator for surgical services. Supplies were the resource with the greatest share of the cost. Within the supply category, implants were by far the largest cost driver. Also driving the cost were expensive miscellaneous

**Step 3: Shift the paradigm**

In the current paradigm for purchasing implants, the vendor sold the implant to the surgeon, and the hospital paid the bill with little input on the vendors or type of implants and related items used.

"We wanted to change the paradigm so the hospital was an active participant in the purchasing decision," Conti says.

Administrators were willing to back the project because they knew from the benchmarking data that the hospital

...items we wanted to target," Conti says.
needed to better manage its costs. “With that external data, the message [to the doctors] has changed,” Conti says. Now when surgeons go to senior management, instead of administrators simply accommodating the surgeons’ wishes, the message is, “We need to understand why we are using these implants so we can better manage the costs.”

**Step 4: Use Six Sigma**

Froedtert decided to use Six Sigma as its performance improvement method.

The basic principle of Six Sigma, which was originally developed by companies such as Motorola, is that by improving processes and reducing variation, organizations can reduce errors and raise quality (sidebar).

Conti took a 2-week “green belt” course in Six Sigma from the American Society for Quality (www.asq.org). A green belt is an employee trained in Six Sigma who leads a QI team as part of his or her job. Though Six Sigma can seem intimidating because of its reputation for statistical rigor, Conti found the tools weren’t hard to learn. “They teach you every step of the process and give you examples to use so you can learn the tool while you are using it,” she says. Statistical analysis doesn’t come into play until the project has measurable results. Then statistics are useful to measure whether the project has made a statistically significant difference and to monitor to make sure the gains are sustained. Though a basic knowledge of statistics is needed, Conti says project teams can use an inexpensive statistical program such as Minitab (www.minitab.com) to do the actual calculations.

Among Six Sigma tools the Froedtert team used were:

- process mapping
- a failure modes and effects analysis (FMEA).

A process map is a type of flowchart that depicts the steps in a process, identifying the responsibility for each step and the key measures (illustration, see page 10).

“Making a process map is a painstaking task, but it is valuable,” Conti says. “It was very eye opening to the front-line staff. They were unaware of the complexity of the implant ordering process and the impact of their decisions about implants on the overall costs.”

The map also showed how the process was affected by multiple “process owners.” Among these were the physicians who ordered the implants (there was a huge difference in cost depending on how far in advance they ordered), the front-line nurses who documented the implants, and the purchasing department, which signed off on the invoices but had nothing to do with the ordering or pricing.

**Step 5: Identify failure modes**

From there, the team conducted an FMEA, which is a systematic method for dissecting a process to identify and prioritize what could go wrong (the failure modes) and plan for ways to prevent failures.

The “failure modes” in implant purchasing turned out to be cultural issues, which was “somewhat of a surprise,” Conti says. The top four failure modes:

1. No one knew the cost of each implant system. Physicians did not know the hospital paid over $900 for a multiaxial screw, for example.
2. Surgeons did not believe the hospital’s cost data. The hospital learned the surgeons were being given misleading cost information by the vendors.
3. The hospital’s information systems could not be linked to give patient-level cost data. Because the hospitalwide purchasing and OR information systems were not linked, the hospital could not match what it was charging patients for lumbar fusions with what it was paying for the implants.

4. Discrepancies were found between implant catalog numbers and what was paid to the vendors. This process was put on a fast track for improvement. Now the implant log includes vendor catalog numbers and serves as a companion to the patient billing sheet so the billing specialist can match and question discrepancies that were documented on the billing sheet. Nurses were provided with additional education on the catalog numbers to document.

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**Cost management**

"The ‘failure modes’ turned out to be cultural issues."

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**Reimbursement news for spinal surgery**

**Highlights of 2004 changes that took effect Oct 1, 2003:**

- Spinal DRG payment increased from 1.8% for DRG 496 (Combined anterior/posterior spinal fusion) to 7.0% for DRG 519 (Cervical spinal fusions w/complications and co-morbidities).
- DRG 496 has the highest reimbursement for the spinal group at $27,506.
- DRG 4 (Spinal operations) is replaced with two new DRGs:
  - 531: Spinal operations with complications and co-morbidities
  - 532: Spinal operations without complications and co-morbidities.
- Compared with DRG 4 2003 payment:
  - DRG 531 payments increased by 36.4%
  - DRG 532 payments decreased by 35.1%.
- New ICD-9-CM procedure codes were created for multiple-level spinal fusions, which will help in tracking costs:
  - 81.62: 2-3 vertebrae
  - 81.63: 4-8 vertebrae
  - 86.64: 9 or more vertebrae.

Source: Orthopedic Network News. www.orthopedicnetworknews.com
Cost management

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Step 6: Develop a physician strategy

Better communication with the surgeons was the core of Froedtert’s strategy for addressing the failure modes and improving the process. The hospital has five surgeons who perform spinal surgery, representing both orthopedics and neurosurgery.

“As we did our analysis, we found there was a great variation in cost among the physicians. We realized that if we could impact our highest-cost physicians, we were going to impact overall costs in the long run,” Conti says.

A report was developed for sharing cost information with the surgeons, with their identities blinded, that includes:

- Cost information for low-, medium-, and high-cost spinal fusion cases
- Details on implant items used
- The patient account and principal diagnosis so surgeons can examine individual records and verify the hospital’s information
- The vendor’s catalog number with price paid for each item. “That was the only way we could get around the mistrust of the cost information,” Conti says.
- Number of fusion levels. “Surgeons were saying their costs were higher than others in the benchmarking report because they are doing multiple levels. We think most hospitals in this benchmarking group are doing multiple levels,” she says.

As a result of the information sharing, one surgeon called Conti and said he was shocked that a bone stimulator cost $5,000. He said he had not received the right information from the vendor.

The surgeon said he would have a medical student review his cases to see if the bone stimulator made a difference in outcomes. If it did not, he said he would stop using it. Research shows that bone growth stimulators can improve bone growth in some patient populations such as refusion operations, but the results are less clear in one-level and two-level fusion operations.

The project team has also consistently reported its implant cost trends to the physicians.

“We have been able to show we have made a statistically significant difference in cost,” says Conti. And as a result, physicians “have totally reversed their relationship with the vendor.” Physicians now require vendors to bring in weekly price lists. When newer products are introduced, such as a polyaxial screw, they tell the vendors they will consider only new products that make a difference in patient outcomes.

“We are amazed at how information really has made a difference,” notes Conti.

Step 7: Develop a vendor strategy

The hospital has not limited the number of vendors for spinal implants. Instead, the hospital and physicians together agreed to say to the vendors that if the vendors want to do business with the hospital, they will be expected to meet the lowest price the hospital is paying for spinal fusion components. The hospital has engaged a consultant to handle the vendor negotiations.

“I think if we had tried to restrict the vendors, we would have had a lot more hurdles to overcome and would not have been as successful,” Conti says.

The pricing will be set up by levels to correspond with the new procedure codes for spinal fusions that took effect Oct 1. There are now separate codes for fusion or refusion of two to three vertebrae, four to eight vertebrae, and nine or more vertebrae, which will make it easier to monitor and compare costs.

In the reports of physician-specific costs, the project team found orthopedics, which had the greatest increase in 2002, had the greatest decrease in the first quarter of 2003. That was the result of one high-volume surgeon stopping routine use of bone stimulators.

Introduction to Six Sigma

What is Six Sigma?

Six Sigma is a methodology:
- aimed at error reduction and eliminating variation
- that relies on performance measurement and statistical analysis.

Goal: Design/improve processes so it is impossible to make an error.

What does Six Sigma mean?

Sigma is a Greek letter used to refer to standard deviation or a measure of variation:
- used to designate the variation around the average or mean
- refers to 99.997% conformance to standards.

Magnitude of difference between sigma levels:

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Source: Beth Lanham, RN, Black belt, Froedtert Memorial Lutheran Hospital, Milwaukee.

On the neurosurgery side, Conti says, “the surgeons are talking to each other and challenging each other to look at evidence.”

As they have begun to discuss the evidence, they have begun to develop physician standing orders, not only for the OR portion of care but across the surgical episode.

Reference


Check our web site for the latest news, meeting announcements, and other practical help. www.ormanager.com
Infection control

Strategies for using prophylactic antibiotics appropriately

- Designate responsibility and accountability for administering the preoperative prophylactic antibiotic.
- Standardize the administration process to administer the antibiotic within 1 hour before the incision.
- Administer prophylactic antibiotics according to guidelines based on local consensus and standing orders specific to the surgical site.
- Make agreed-upon antibiotics available in the OR.
- Standardize the process to ensure timely delivery of preop antibiotics to the holding area.
- Have a visible reminder or checklist to give antibiotics on each case (eg, a colored sticker).
- Systematically document antibiotic administration on every patient chart (paper or electronic).
- Develop a system so the antibiotic is hanging at the head of the patient’s bed ready for administration.
- Have a protocol to deliver the antibiotic to the OR with the patient.
- Educate the OR staff on the importance and reasoning for antibiotic timing.
- Provide feedback monthly on compliance with prophylactic antibiotics and infection rates.

Source: Centers for Medicare and Medicaid Services.

Continued from page 1

The circulators agreed to champion this.

for improving antibiotic prophylaxis are:
- selecting the appropriate prophylactic antibiotic
- giving it within 60 minutes of the incision time
- discontinuing it within 24 hours after the end of surgery.

An expert panel is seeking endorsement from surgical specialty societies for these measures. Once the specialty guidelines are published, “that is going to make a huge difference,” says Rosa Johnson, ARNP, MN, CPHQ, director of the national collaborative. When physicians question a hospital’s recommendations, leaders will be able to refer them to the specialty guidelines. The guidelines plus other collaborative results are being submitted for publication.

Groundwork for the collaborative was laid by the Oklahoma Foundation for Medical Quality, which abstracted 30,000 charts across the country looking for surgical site infection prevention measures.

“A lot of places do well in choosing the appropriate prophylactic antibiotic,” says Johnson. “Where they fall down is in not giving it within 60 minutes of the incision time and not discontinuing it within 24 hours after surgery.”

The biggest pushback from physicians was discontinuing antibiotics at 24 hours. Many insist on continuing antibiotics until patients’ tubes and drains are out. But evidence doesn’t support use of prophylactic antibiotics at all after surgery, Johnson notes.

And when an infection does occur in these cases, it is more likely to be caused by a resistant organism. In fact, 16% of Clostridium difficile infection in surgical patients can be attributed to prophylaxis alone. Patients who receive broad-spectrum or prolonged courses of antibiotics have an even greater risk, and those who receive inappropriate antibiotic prophylaxis are theoretically at risk for other resistant pathogens.

Lessons learned

The two main lessons from the collaborative:
1. Have standing or preprinted orders.
   With standing orders, it is clear which patients need antibiotics, and physicians don’t have to remember to write the order.
2. Designate someone with specific responsibility to give the antibiotic.
   Each hospital in the project decided who was responsible and gave them clear accountability and responsibility for that duty. Frequently, it is the nurse or anesthesiologist in the holding area.

   The CDC says that having prophylactic antibiotics “on call” to the OR isn’t appropriate because if there are delays or schedule changes, the antibiotic may not be given in the right time frame.

LDS Hospital in Salt Lake City, which has studied antimicrobial prophylaxis since the 1970s, found results improved when nurses in the holding area volunteered to take primary responsibility for giving the first dose according to a checklist in the patient’s chart. Once this process was in place, the number of patients who were given antibiotics in the right time frame rose from 58% to 72%. Results improved even more when the information system was programmed so a standing order (with the agreement of the surgeons) would be placed through the OR scheduling system for patients who needed antimicrobial prophylaxis. With that, correct timing increased to 96%.

Here’s how some hospitals in the collaborative improved their antibiotic process.

Mercy Health Center
Oklahoma City
Outcomes

- Reduced surgical infection rate by 78% in populations having coronary artery bypass, hip and knee surgery, colon surgery, and hysterectomy.
- Achieved 100% on-time antibiotic administration for target populations.
- Achieved 100% 24-hour discontinuation of antibiotic after surgery.
- Went from 100 surgical procedures to just 10 procedures.
- Achieved 100% on-time antibiotic administration for target populations.
- Achieved 100% 24-hour discontinuation of antibiotic after surgery.
- Went from 100 surgical procedures to just 10 procedures.

At Mercy, circulating nurses administer prophylactic antibiotics, a decision that was part of the well-planned effort to improve antibiotic administration.

“The circulators agreed to champion this. The team didn’t target them. We collaborated with anesthesia to make sure everyone was comfortable with that approach,” notes Ronda Pasley-Shaw,

Continued on page 14
**CDC recommendations**

1. Administer a prophylactic antibiotic agent only when indicated. Select it based on its efficacy against the most common pathogens causing surgical site infections for a specific operation and on published recommendations. (See Table 4 on p 104 in CDC Guideline for Prevention of Surgical Site Infection.) Category IA

2. Administer intravenously with the initial dose timed so a bactericidal concentration is established in serum and tissues when the incision is made. Maintain therapeutic levels in serum and tissues throughout the operation and until, at most, a few hours after the incision is closed in the OR. Category IA

3. Before elective colorectal operations, in addition to no. 2 above, mechanically prepare the colon by use of enemas and cathartic agents. Administer nonabsorbable oral antimicrobial agents in divided doses on the day before the operation. Category IA

4. For high-risk cesarean section, administer the prophylactic antimicrobial agent immediately after the umbilical cord is clamped. Category IA

5. Do not routinely use vancomycin for antimicrobial prophylaxis. Category IB

**Note:** Category IA and IB recommendations should be adopted by all health care facilities. They differ only in the strength of the evidence.


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RN, CIC, manager of epidemiology and occupational health, who is change agent for the process.

Administering the antibiotic became one of the priorities for circulators after they interview the patient and check allergies. They also are able to monitor for any allergic reactions.

In gearing up for the project, careful plans were made for communicating with physicians, educating staff and physicians, selecting the project team, and phasing of rapid-cycle improvement projects. Rapid-cycle projects use the quality improvement process to test changes quickly using a small sample and measure the results.

“The work to get a project ready to roll is invisible but terribly important,” says Pasley-Shaw. Before calling any meetings, she and other collaborative leaders, including John Harkess, MD, the infectious disease specialist, held “curbside” chats with key physicians, catching them by the coffee pot or in the hallway.

“A lot of times how the message is delivered is more important than the content,” says Pasley-Shaw.

Mercy had already successfully revised antibiotic administration in cardiovascular surgery in a 5-year effort, so they planned to build on that success.

They cultivated clinical champions among the surgeons to identify good candidates for rapid-cycle projects.

Pasley-Shaw gathered literature and delivered the information in the manner surgeons and staff were comfortable with. The National SIP project provided support in regular conference calls, literature reviews, sample protocols, and other tools.

To help circulator nurses prepare for their new responsibility, they completed a learning activity packet (LAP) on antimicrobials with a posttest. In the posttest, nurses were given patient scenarios and asked to use an algorithm to select the right drug and then refer to standing orders to determine the drug regimen. They were also given the pocket-sized Sanford Guide to Antimicrobial Therapy (Antimicrobial Therapy, Inc, 2003; www.sanfordguide.com) as a reference.

In selecting the project team members, leaders included not only caregivers but also others who played key roles such as a pharmacist and representatives from information technology (IT) and materials management.

IT staff were important because they were able to modify screens in the hospital’s electronic patient record system so certain fields had to be completed for the record to be signed off. That enabled data for the project to be captured and reported. Materials management staff aided in changing par levels in key supplies. They also changed antibiotics and par levels in the automated medication dispensing stations.

**Analyzing the process**

The project team conducted a failure modes and effects analysis (FMEA) to analyze the antibiotic delivery process. Flow charting showed “this was a convoluted process that nobody could make work,” Pasley-Shaw commented.

The project team also developed a protocol, standing order set, and procedure to guide every step. (See resources.)

The process started with the preoperative nurse who does the phone assessment and documents the patient’s allergies and other medications taken. The nurse documents the information in the computerized medical record.

“That sets the pace for what antibiotic will be selected at the time of surgery,” says Pasley-Shaw. Preop nurses also have the Sanford Guide at their fingertips. “That way, when patients give the preop nurse their medications, the nurse can cross-reference them, and we can identify early on if there are any contraindications or allergies for antibiotics,” she says.

**Strategies for improving**

Team members met in small groups to work on different aspects of the process, such as the circulator’s role in delivering the antibiotic, which requires several steps. For example, antibiotics come in several forms, such as prefilled piggyback or multitube or single-use vials. If the drug has to be reconstituted, the nurse must gather additional supplies. If all of the steps aren’t completed, the patient may not receive the drug on time or may receive only the diluent without the drug.

Another strategy was to remove antimicrobials not on the approved list from the OR supply line. The drugs were first moved to the satellite pharmacy, then to the main pharmacy. If the doctor asked for a drug not on the approved list, the staff was coached to say, “I will be happy to get that for you, but we will have to send to the pharmacy for it. In the meantime, we have cefazolin here. Would you like to use that instead?” Dr Harkess was available by phone to talk to surgeons about their concerns.
Infection control

“That was helping people to do the right thing,” Pasley-Shaw says.

The hospital also planned steps for discontinuing prophylactic antibiotics at 24 hours after surgery. Once the Department of Surgery approved the change, standing orders were changed in the information system to discontinue antibiotics at 24 hours. Because the patient record is computerized, “we didn’t have to search out old standing order sets in drawers and remote locations,” she says. “With our wonderful pharmacy and IT support, we were able to pull up those targeted procedures, and with a couple of key strokes, change the orders.”

Pasley-Shaw had been documenting C difficile cases for several years and had anecdotal information linking antibiotic exposure times to C difficile infections in surgical patients, which helped make the case for discontinuation.

Nurses in the postoperative care units were informed about the change in the orders so they would know why antibiotics weren’t being continued past 24 hours.

To track infections, Mercy, like many in the collaborative, uses the number of cases between infections. Because infection rates were already low, it would take large volumes of cases to detect a change in the infection rate. Counting cases between infections makes the change more visible.

“This is not the classic infection control surveillance tool, but it did let us allay the fears of the few who were concerned about the change in antimicrobials,” she says.

After a year in the collaborative, the hospital held a celebration day hosted by Rose Dupas, RN, CNOR, director of perioperative services, who had been a strong ally through the process.

“We hosted a lunch and dinner for all of the surgery crews, and all of the administrators were there to thank them,” says Pasley-Shaw.

Providence Alaska Medical Center

Anchorage

Outcomes

• Improved on-time delivery of antibiotics from 50% to 95%
• Increased 24-hour discontinuation of antibiotics from 54% to 61%

In a different approach, anesthesiologists deliver the antibiotic at Providence Alaska Medical Center. Nursing leaders credit anesthesiologist Barbara Chen, MD, for her leadership in presenting the evidence to the physicians and working with them to develop a standard protocol. The hospital is served by one anesthesiology group.

“We have found we have had good consistency since the anesthesiologists stepped up to the plate,” says Betty Gwaltney, RN, CPHQ, MBA, director of outcomes management.

There has been a team effort to support them in that responsibility. Nurses play a role because they make the antibiotic available to the anesthesiologists and flag the chart so they know an antibiotic is due.

Having anesthesiologists take on the responsibility has eliminated steps for the circulating nurses and saved costs. By eliminating IV piggybacks for antibiotics, the hospital estimates it saves $15,000 to $20,000 a year, not counting the nurses’ labor.

Participating in the collaborative “was a really good motivator for the staff,” Gwaltney adds. “This was a great opportunity for them to learn about processes that make a difference for patients.”

OR Manager acknowledges the Colorado Collaborative on Surgical Infection Prevention for providing background for this series.

References


Resources on prophylactic antibiotics

American Society of Health-System Pharmacists


Centers for Disease Control and Prevention Guideline for Prevention of Surgical Site Infection, 1999

www.cdc.gov/ncidod/hsp/SSI/SSI_guideline.htm

Scientific overview and recommendations. Table 4, p 104 lists types of operations with references on prophylaxis.

Centers for Medicare and Medicaid Services

Surgical Infection Prevention website.

www.medqic.org/content/nationalpriorities/topics/projectdes.jsp?topicID=461& pageFrom=resources

Among resources are:

• Guideline crosswalk (look under Guidelines)
• Evidence base for duration of antimicrobial prophylaxis
• Mercy Health Center’s tool kit on prophylactic antibiotics with fast facts, sample protocol, order set, and posttest.

Infectious Diseases Society of America


Sanford Guide to Antimicrobial Therapy


www.sanfordguide.com

Pocket-size guide to antimicrobials. Also comes in PDA edition.
Managing the OR’s equipment assets

If you are looking for a crystal ball to peer into the future of asset management in the operating room, look no further than Providence St Vincent Medical Center in Portland, Ore.

During the past year or so, Providence St Vincent has installed state-of-the-art infrared OR patient and equipment tracking systems to help manage 110 surgery cases per day in its 27 ORs.

The 450-bed hospital also maintains a computer database inventory of its assets, including maintenance contracts, service schedules, and surgical instruments, says Deborah Tuke Bahlman, RN, MS, regional surgical services information systems manager with Providence Health System, the Catholic hospital’s parent organization.

While most hospitals do not have the volume of surgical cases Providence St Vincent has to justify the expense of such a comprehensive system, hospitals can do a better overall job at managing OR assets, says James Keller, director of the health devices group at ECRI, a nonprofit health services research organization based in Plymouth Meeting, Pa.

Many hospitals maintain inventories of equipment and maintenance contracts in separate departments, Keller says, a practice that can lead to inefficiencies and lost revenue. “The clinical laboratory, emergency department, and OR have service contracts scattered around the hospital,” he says.

Keller suggests hospitals create a centralized asset management system with standard nomenclature. The system should also be able to track maintenance records and provide reports.

“Many hospitals have the expertise to do it themselves,” he says. “If they can’t, an alternative is to use an outsourcing asset management service that can cover everything from soup to nuts or to use niche services such as those that maintain gastroenterology instruments.”

Untapped area for savings

Asset management is a large untapped area that can reap savings of up to 30%, says Anthony Clevinger, district manager for South Florida in Fort Lauderdale with Universal Hospital Services (UHS), a Minneapolis-based outsourcing company.

“We can manage already owned equipment, or we can bring in new equipment,” Clevinger says. “If they want just the software and (contract staff), we offer a ‘pay-per-touch’ charge.”

Under pay-per-touch, UHS is responsible for retrieving, processing, and distributing hospital-owned equipment. If it is UHS’s equipment, the charge goes to pay-per-use, which is more expensive but covers more services, including maintenance, he says.

“(Pay-per-use) transfers accountability for maintenance of the equipment to the outsourcing company,” Clevinger says. This type of plan saves the hospital from laying out capital dollars to upgrade technology.

One benefit of outsourcing, Clevinger says, is that hospitals can build those known costs into room charges. Another benefit is that maintenance costs generally are lower than the extended equipment manufacturer warranty.

Keller notes that outsourcing companies sometimes can become, in effect, the biomedical department.

“There are huge cost issues hospitals should be aware of in making the transition to outsourcing,” he says. “Make sure added-value services normally provided by in-house biomedical engineering departments are included in the outsourcing arrangement.”

“Are they able to provide troubleshooting and education, participate in procurement, serve on committees, and assist with strategic planning? If these aren’t part of the equation, there is a big downside.”

An OR tracking system

In June 2002, Providence St Vincent started to track its OR equipment using tags that emit infrared signals. A complete asset inventory was completed in 2000 before a 3-year construction project began to double the size of the OR, Bahlman says.

In July 2003, the hospital completed its $46 million OR expansion project, which also increased preop beds to 53 from 25 and recovery beds to 27. It also has three OR eye suites and five cardiac surgery suites that are not currently using the system.

“We are very lucky to have a tracking system in our OR, which involves tagging all portable equipment from tourniquets and cautery machines to specialty carts,” says Kendra Fowler, RN, the hospital’s surgical materials manager.

Through ceiling-mounted sensors, surgery technicians can locate any tagged piece of equipment within the department using a desktop computer. In March 2003, patients began wearing badges that emit signals to help staff track them through preop, surgery, and postop phases.

The OR tracking system improves quality and saves staff time and money, says Bahlman.

For example, video equipment technicians who are responsible for gathering equipment for surgical cases can go into the computer and locate the equipment by an “X” on a map of the OR or in writing on any computer screen.

“We are able to do more surgeries...
because of the time it saves staff,” she says. “It is a major efficiency from a financial standpoint. It pays for itself.”

Saving on phone calls

A tracking system is a boon for large perioperative areas, she adds.

“Once we reached 50 cases a day, we knew we needed to do something. It was difficult to find equipment and locate patients to determine their status,” she says. “We spent lots of time on the phone asking people” where equipment and patients were.

A hospital survey before the OR systems were installed found surgical staff spent an average of 11 phone calls per patient, each call averaging 15 seconds, she says.

“We have almost eliminated phone calls with the new system.”

Providence St Vincent developed its OR systems with the help of two companies—Versus Technology, Traverse City, Mich, and Healthcare IT, Charlotte, NC. Versus Technology provided the passive tracking components, and Healthcare IT adapted its emergency department tracking technology to the OR, Bahlman says.

The hospital has an annual service and maintenance contract with Healthcare IT, primarily to provide upgrades to the system, she says.

Know your assets

“We realized when we built the new unit that you want to know what your assets are,” Bahlman says. “Our clinical engineers can go into the database and make a comment on when maintenance was performed.” The maintenance information also helps the hospital meet Joint Commission on Accreditation of Healthcare Organizations standards, she adds.

Several other hospitals in the Providence system are considering adapting the system for their hospitals, Bahlman says.

Small hospitals or small ORs may not need electronic tracking technology to monitor their equipment or patients, Keller of ECRI notes.

“Tracking systems are more helpful in the larger general hospital where people responsible for delivering devices like infusion pumps to patient care areas can’t always find them because they are scattered around the facility,” he says.

There is no one best way for ORs to manage their assets, Keller says. “A lot depends on how the hospital is set up. Each hospital has different needs. It is important for all hospitals to have a good and complete inventory. The inventory can be housed in different departments, but there should be one place that has a complete list.”

—Jay Greene

Jay Greene is a freelance writer in St Paul, Minn.

Opting for outsourcing

More than 2 years ago, 200-bed Mease Countryside Hospital in Safety Harbor, Fla, opted to outsource asset management to GE Medical Systems, Waukesha, Wis. The primary motivation was to standardize equipment and maintenance management and to help with capital budget planning. Mease Countryside is part of four-hospital Morton Plant Mease Healthcare. The system also needed to reduce costs and full-time equivalent staff.

“Our facilities management department was not staffed and equipped to respond to the repairs and service needs of the hospital,” says Robert Reifert, the OR business manager. “We had two options: call the manufacturer or outsource.”

He says the hospital was at the mercy of manufacturers when equipment broke down. “You aren’t sure when they will come for the repair. If you have equipment down, you have to close a room, and you can’t afford to close a room.”

GE maintains two full-time technicians at Mease Countryside.

“They keep a computerized record of each piece of equipment, maintain service records, and do preventive maintenance on a scheduled basis,” Reifert says. “They are the first one we call if something breaks down.”

He says the hospital also saves money by not purchasing extended manufacturers’ warranties.

“GE Medical keeps the maintenance records on all the equipment, and that helps to meet standards for JCAHO (Joint Commission on Accreditation of Healthcare Organizations),” Reifert says.

The hospital also uses GE’s IntelliMotion electronic tagging system to track hospital equipment, including IV pumps, electronic thermometers, wheelchairs, and patient transports. OR equipment is not tagged because the hospital averages only about 16 cases per day in its five ORs, he says.

Reifert offers one cautionary piece of advice when outsourcing: “The (company) is in the business to make money. The more that is in the inventory, the more they get paid. When they come in, they want to inventory everything they can get their hands on.” He had some outdated video equipment in his office. They came and got that and added it to the inventory.

The solution, he says, is switching to line-item pricing where the hospital pays only for equipment actually under service agreements.

“GE will inventory all the equipment and tell us the status of that equipment, whether it is being used or not,” Reifert says. “If it is not maintained or used after 2 years, it will go on to an obsolete list.” The hospital can either sell the equipment or dispose of it.

Health spending hits $1.6 trillion

U S spending on health care rose to $1.6 trillion in 2002, a 9.3% increase and almost twice the growth rate for the gross domestic product (GDP), the Centers for Medicare and Medicaid Services (CMS) reports.

Health care now consumes 14.9% of the GDP, after holding steady at about 13.3% through most of the 1990s.

Hospital spending consumes nearly a third of health care spending. Hospital spending rose by 9.5% in 2002, much faster than the average annual increase of 3.7% from 1993 to 2000. The report is in the January-February Health Affairs at www.healthaffairs.org.
What drives labor costs for OR cases?

How many staff should be assigned to a procedure such as coronary artery bypass graft (CABG)? The answer: It depends.

Staffing patterns and labor costs varied widely in recent studies by OR Benchmarks (chart).

Two main factors drive labor costs, notes OR Benchmarks’s director, Judy Dahle, RN, MSN:

- The number and type of personnel assigned. Facilities with the lowest labor costs assigned half or fewer FTEs than those with the highest labor costs.
  “The minute you add extra people, such as first assistants, it drives the cost up,” Dahle says.
- The length of the procedure. Facilities with the lowest labor costs had procedure times about 50% less than those with the highest labor costs.

Higher surgical volume was associated with lower labor costs for two procedures, total hip replacement and laparoscopic cholecystectomy.

What influences staffing?

A number of factors influence the number of staff assigned to a case.

Teaching hospitals often can keep nursing FTEs low because residents and medical students are available to assist the surgeon. Community hospitals may have to provide nursing personnel to assist.

Hospitals also may assign different numbers of personnel for different stages of a procedure. During a CABG, for example, a hospital may have two scrub persons and two circulators during the harvesting of the leg vein. After the vein is harvested, there may be only one scrub and one circulator.

Some states require more than one surgeon during open-heart surgery, which might reduce the need for nursing staff.

Though one might think the surgeon is the only one who affects procedure time, the nursing staff also has an influence.

“Does the surgeon have to wait to get a certain size of prosthesis? Does he have to wait for an instrument that might not have been ready? All of that adds to the procedure time,” Dahle comments.

A staff that is well organized, with supplies and instruments correctly picked and equipment well maintained, helps keep the procedure time to a minimum.

For information on OR Benchmarks, visit www.orbenchmarks.com

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**OR labor costs for three procedures**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Low labor cost</th>
<th>High labor cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total hip replacement</strong></td>
<td></td>
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<tr>
<td>Annual volume</td>
<td>130</td>
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<tr>
<td>Procedure time</td>
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<tr>
<td>Labor cost/case</td>
<td>$197</td>
<td>$1,007</td>
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<td>Procedure FTEs</td>
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<td>Staffing pattern</td>
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<td>RN, ST, FA</td>
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<tr>
<td><strong>Average (mean) labor cost for total hip for 17 facilities = $484.</strong></td>
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<tr>
<th>Procedure</th>
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<tbody>
<tr>
<td><strong>Coronary artery bypass graft</strong></td>
<td></td>
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<tr>
<td>Annual volume</td>
<td>338</td>
<td>450</td>
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<tr>
<td>Procedure time</td>
<td>177 min</td>
<td>341 min</td>
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<td>Labor cost/case</td>
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<td>Procedure FTEs</td>
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<td>4.8</td>
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<tr>
<td>Staffing pattern</td>
<td>RN, ST</td>
<td>2-3 RNs, FA</td>
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<td><strong>Average (mean) labor cost for CABG for 10 facilities = $797.</strong></td>
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<tr>
<th>Procedure</th>
<th>Low labor cost</th>
<th>High labor cost</th>
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</thead>
<tbody>
<tr>
<td><strong>Laparoscopic cholecystectomy</strong></td>
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<tr>
<td>Annual volume</td>
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<tr>
<td>Procedure time</td>
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<tr>
<td>Labor cost/case</td>
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<td>Procedure FTEs</td>
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<td>4.3</td>
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<tr>
<td>Staffing pattern</td>
<td>RN, ST</td>
<td>RN, ST, FA, XT</td>
</tr>
<tr>
<td><strong>Average (mean) labor cost for lap chole for 19 facilities = $291.</strong></td>
<td></td>
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</tr>
</tbody>
</table>

Note: Facility data is based on average for five procedures.

Abbreviations: RN is registered nurse. ST is surgical technologist. FA is first assistant. XT is x-ray technician.

Source: OR Benchmarks. www.orbenchmarks.com
Fifth Annual
OR Business Management Conference

May 12-14, 2004 •• Albuquerque, NM

An expanded program… for those concerned with the financial management of the OR

In addition to the two-day conference, three all-day preconference seminars will be offered:

- Management of a Bariatric Surgery Program
- Working Through an OR Construction Project
- Managing the Inventory Supply Chain

The two-day conference will focus on collaborative improvements to OR efficiency.

The conference will be at the Hyatt Regency in historic Albuquerque.

The brochure for the conference is available on the OR Manager website, www.ormanager.com.
Use of agency staff and travelers is a fact of life with today's staffing shortages. Temps help fill in during vacancies and surges in volume. Ideally, they support the rest of the staff and help keep them from burning out.

About 25% of ORs use temporary staff, according to the OR Manager Salary/Career survey published in the September 2003 issue. On average, when temps are used, they make up 8% of the staff.

Usually, temporary personnel are clinical experts and can step in after a brief orientation. But for them to be used effectively, the facility needs a well-organized process for introducing temps into the system, documenting their expertise, and monitoring their performance.

The Joint Commission on Accreditation of Healthcare Organizations requires organizations to determine qualifications and competencies for all staff, including temporary personnel.

Complying with standards is not the only reason to have a good process. Agency personnel are costly, and the facility needs to use them effectively to get the most from its investment. And temps who don't blend well with the staff can take a toll on morale.

A streamlined orientation

Massachusetts General Hospital (MGH) in Boston reorganized its orientation for temporary personnel about a year ago. The new process includes a grid to track their orientation, a 1-month assessment tool, and a revised orientation packet.

MGH has been using 18 to 20 travelers, mostly surgical technologists (STs), which are hard to recruit in that area. Travelers make up about 9% to 10% of the OR’s clinical staff of 190 direct-care FTEs. A major teaching hospital with 40 ORs, MGH performs about 24,000 procedures a year.

MGH decided to revise its orientation after managers heard from the staff that the travelers’ expertise often didn’t match what they needed. A staff survey found 35% thought travelers didn’t always have the skills needed for complex cases, and 25% said there was a lack of accountability.

Travelers received a 1-week orientation but were overwhelmed with paperwork that made it hard for them to find key information they needed.

In addition, there was confusion about what travelers could or could not do. There were questions about their real skill set. For example, what does it mean when they say they have had a “little ortho”? Sometimes, a traveler would actually have different experience than what their paperwork portrayed. There were also questions about whether they could serve as preceptors or work off-shifts.

Accountability and lines of reporting weren’t clear. “They might be on a different team every day. There was no tie-in to keep track of their performance competence, or attendance,” notes Marion Freehan, RN, MPH/HA, CNOR, nurse manager for the main operating room.

She decided it was time to streamline the process and organized a task force to do so. The goals were to:

- Increase travelers’ support for OR operations
- Improve the efficiency of the orientation process
- Develop tools to assess, verify, and document competency
- Improve communication
- Develop reassessment tools.

New process, new tools

The revised traveler orientation process still takes 1 week but gives the traveler, the staff, and managers a better idea of what is expected.

“Most traveling nurses are experts and have a good knowledge base. The hard thing here is the size of our institution,” comments Sue Hanneffant, RN,
Supplemental O₂ linked to higher infection rate

Contrary to previous findings, supplemental oxygen was associated with an increased surgical site infection (SSI) rate in a study in the Jan 7 JAMA. An earlier study found the SSI rate was lower with supplemental oxygen.

In the new study, a double-blind, randomized, controlled trial involving 165 patients having abdominal surgery, those who received a high fractional inspired concentration of oxygen (FIO₂ of 0.80) during surgery and for the first 2 hours after surgery had an infection rate of 18% compared with 11% for a group that received an FIO₂ of 0.35. FIO₂ remained a significant predictor of surgical site infection in the first 2 weeks after surgery in a multivariate regression analysis. Patients who developed an SSI had a significantly longer hospital stay—on average, more than double those who did not develop infection.

The authors led by Pryor note that there are a number of important differences in this study and a 2000 one by Greif et al from Austria. Patients in the Greif study were much more likely to receive red blood cell transfusions and when transfused were more likely to receive double the number of units. Their mortality rate was double and the mean hospitalization nearly twice as long. These differences suggest a “fundamental dissimilarity” in patient management, Pryor and associates say.

They conclude that the results of the new study do not support routine use of a high FIO₂ in abdominal surgery patients to reduce the incidence of SSI. In fact, a high level of O₂ may have deleterious effects.


To help address morale issues, the OR leaders decided to limit contracts for individual travelers to 1 year.

“After a year, travelers start to feel like part of the staff and want to join negotiations for time requests, assignments, team placement, and so forth,” says Freehan. Limiting the contracts helps to reinforce that the relationship is contractual.

“We also won’t take them if they have worked at MGH, live in the area, and go to work for a traveling agency, even if they have been gone from the hospital for a couple of years,” Freehan says.

She is upfront about MGH’s expectations during the interview. She tells traveler candidates that MGH expects them to work two weekends and two off-shifts a month. There is no call, and overtime needs management’s approval.

“The staff’s perception is that the travelers get the ideal times. The message we send is, ‘You are here to supplement our staff.’ The travelers are expected to do everything our permanent staff is expected to do.”

The changes have made a difference. A staff survey done 9 months into the new process found 100% satisfaction.

BSN, a clinical coordinator. “We try to keep them in one cluster. They need orientation primarily to find out where things are and who the key resource staff are. We keep them with a buddy for about 4 days. We tend to get feedback very early on how they are doing.”

In addition to a perioperative skills checklist, new tools have been added, including:

• an orientation grid that tracks and verifies activities that have been performed and when
• a checklist to document orientation to specific equipment
• a 1-month agency assessment form of the traveler’s clinical and social performance facilitated by the orientation coordinator with team leaders after consulting with the traveler’s preceptors and team members.

For the equipment checkoff, travelers can state whether they have used the equipment without a formal demonstration.

“We take it as an honest assessment,” Freehan says. Though she would prefer a hands-on demonstration on every item, that isn’t realistic. She has learned from other hospitals that they accept an oral verification. In an equipment-intensive specialty like orthopedics, travelers may be asked to demonstrate competence on critical equipment.

“We have stressed that if a traveler isn’t comfortable with a piece of equipment, they are accountable for speaking up,” she says. Agency personnel are included in orientations for new technology and equipment for their clusters.

The traveler’s orientation packet and personnel file documents have been pared down and reorganized (sidebar).

“Before, we had reams of information and policies and procedures,” Freehan notes. The new packet includes key items like the confidentiality agreement. Travelers are shown where to find resource books that have the complete set of MGH policies.

Travelers are assigned to a home team or cluster with oversight by the clinical service coordinator. When reviewing resumes, the nurse manager makes a preliminary assignment based on the traveler’s experience and depending on project- ed staffing needs at the time. MGH requires at least 2 years of experience. The decision to renew a contract is a consensus among the nurse manager, clinical service coordinator, and staffing/scheduling coordinator. Agency personnel are not used as preceptors unless absolutely necessary, Freehan says.

To help address morale issues, the OR Manager’s Toolbox

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

Go to: www.ormanager.com
Look under The OR Manager’s Toolbox.
Do you know about the rep in your OR?

Complex instrumentation, new procedures, and sophisticated equipment, along with a steady stream of new products have expanded the need for technical assistance in the OR. It is a rare day that we do not have a salesperson or technical representative scheduled to be in the OR. They have become unofficial members of the OR team. What are the expectations with regard to their behavior in the OR?

In the United Kingdom, the National Health Service has taken an aggressive approach. “Anyone who is invited into hospitals or areas of clinical care in an advisory capacity is bound by the same legal and ethical obligations as those employed within the NHS,” according to the NHS Code of Practice. In this country, the confidentiality requirements of the federal Health Insurance Portability and Accountability Act (HIPAA) that took effect in 2003 clearly place constraints on visitors.

The Association of periOperative Registered Nurses (AORN) issued a position statement on the role of the professional representative in the perioperative setting in April 2000. The Joint Commission on Accreditation of Healthcare Organizations has said hospitals have a responsibility to control activities of all participants in the care setting, whether direct employees or not. However, not all facilities have developed formal policies that outline how they will assure that company representatives have the appropriate knowledge about basic aseptic technique, confidentiality, and general decorum in the OR.

What is needed to ensure competency?

Should we become more assertive? Even a seasoned perioperative nurse is monitored during orientation and is required to demonstrate competence before being scheduled to work independently. Yet we have accepted medical device representatives into the OR with little or no screening.

Unfortunately, there is no universal-ly agreed-upon set of competencies for these individuals. The person assigned by the manufacturer or distributor to the complex device you are using for the first time could be a veteran with a high level of professionalism, expertise, and competence or a novice in the OR for the first time alone.

How do you measure and document the level of competency? Is this really our responsibility? If done internally, the cost can be significant. Training sessions would have to be scheduled on an ad hoc basis because new products, procedures, and representatives are constantly being introduced. In the UK, there is a hands-on course many of the major medical device manufacturers require their representatives to attend. When the course is successfully completed—with a passing mark on the final exam—the sales representative receives a certificate verifying competency. This “card” has become the “gold standard.”

What are the resources?

What resources do we have? At one time, AORN offered a course for sales representatives, but it is no longer offered. Several small continuing education companies offer live seminars, and some medical device companies offer their own OR-environment training as part of their orientation program. There is an on-line training program endorsed by AORN. Most of these programs provide a wallet card or certificate of completion the representative can carry and show on demand.

Before accepting these cards or certificates, you should ask for an outline of the curriculum or preview the course yourself. Are all of the aspects addressed that you think are critical to perioperative patient and staff safety related to the role of a company representative? If not, you have the choice of requiring another course or supplementing the information yourself. For example, each individual entering your facility may need to be shown essential safety information such as exit routes and alarm locations. How will you

Should sales reps have health screening?

There are no specific standards or regulations governing health screening for sales personnel who will be in the OR during surgery.

Mary Ann Gruden, CRNP, MSH, COHN-S/CM, an occupational health nurse and executive president of the Association of Occupational Health Professionals in Health Care, suggests that the most prudent course would be to have requirements similar to those for health care workers or volunteers.

That would include ensuring the sales person does not have active tuberculosis and has immunity to chicken pox. Sales personnel who could be exposed to bloodborne pathogens should also consider hepatitis B vaccination, she suggests.

What about TB testing?

Ideally, sales reps who will be visiting health care facilities should have TB testing as part of that training and have it updated, notes Jean Randolph, RN, MPA, COHN-S/CM, of the American Association of Occupational Health Nurses. The test takes 48 to 72 hours to be read.

She acknowledges that enforcing this would be difficult without a regulation or national standard.

A person with active TB must be coughing for the TB bacillus to be spread, she adds. A person who is actively coughing would not be allowed to be in the OR anyway.

The Centers for Disease Control and Prevention does not address sales personnel in its Guidelines for preventing transmission of Mycobacterium tuberculosis in health care facilities, 1994.

Regarding students and others who are not paid, the guidelines state: “Administrators of health care facilities should ensure that physicians and other personnel not paid by, but working in the facility, receive skin testing at appropriate intervals for their occupational group and work location.”

In addition, she advises that anyone who spends time in the OR should have hepatitis B vaccination. She believes it should be up to sales personnel to get the vaccination on their own or through their company.

—Pat Patterson

Continued on page 24
Managing Today’s OR Suite

Chicago Hyatt Regency
October 6–8, 2004

Sneak preview
General session speakers already on board…
• Carl Hammerschlag, MD, The Way it Was is Not The Way it Is
• Michael Roberto, Harvard Business School, Leadership Lessons Learned from the Everest Disaster
• Mary Murphy, RN, 2002 OR Manager of the Year

You’ll have eight all-day seminars and 32 breakout sessions to choose from. A sampling of what’s to come…

All-day seminars
• Transformational Leadership
• Six Sigma for Process Improvement
• Working with Difficult People
• Managing a Central Processing Department
• Elevating the Role of the Surgical Services Director
• Supply Chain Management

Breakouts
• Creating a Just Culture
• Ambulatory Track: Holistic Patient-centered Model, Credentialing
• Fire Safety
• Pain Management
• Improving Patient Flow
• Preoperative Patient Preparation Using 21st Century Technology
• Managing Intraoperative Medication
• Service Recovery Programs
• OR of the Future

And much, much more…
Networking, receptions, exhibits, and other educational opportunities.
track and document this process?

The industry representative is here to stay as an important member of the OR team. It is incumbent upon facilities to set clear expectations for the training and competencies these individuals should have prior to presenting themselves to the OR and to enforce these requirements uniformly. Medical device companies are aware of the increased demand for such training, but a universally accepted training curriculum will be developed only when facilities consistently require it. ❖

Marimargaret Reichert, RN, MA
Olmsted Falls, Ohio
—Janet K. Schultz, RN, MSN
Denver

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

A sample policy from one hospital that took an active role in defining the role of the health care industry representative is at www.ormanager.com. Look under the OR Manager’s Toolbox.

Delaware provider status

OR Manager, Inc, has received provider status for continuing education from Delaware. Provider status from the state of California continues. OR Manager believes all states except Delaware recognize the California provider status.

Recognition by the Delaware Board of Nursing means all U S attendees of OR Manager-sponsored educational programs will receive continuing education units.

We have accepted reps with little or no screening.

California hospitals sue to modify nurse staffing regulations

The California Healthcare Association (CHA) filed a lawsuit against the state Department of Health Services (DHS) Dec 30, alleging that the state’s interpretation of new nurse-to-patient ratio regulations will put nearly all hospitals out of compliance with the law, which took effect Jan 1.

DHS interprets the regulations to mean the ratios must be maintained even while nurses are away from the unit temporarily on breaks or transporting patients. CHA says that if this interpretation isn’t changed, nurses will not be able to take even a short break—even on their own unit—without having another qualified nurse to fill in. Because of California’s nursing shortage, hospitals say there are not enough nurses to meet this requirement.

CHA wants DHS to go back to its previous interpretation that nurses on breaks could continue to be counted in the ratios.

CHA says it is not seeking to delay the rules or a repeal of the law but requested a hearing within 30 days. The association says that unless immediate action is taken, hospitals may be forced to cancel elective surgeries, discharge patients sooner, and delay new admissions.

California’s nursing ratios law is the first in the country to mandate nurse-to-patient ratios by unit.

Orthopedic practices hit by big cost increases

Orthopedic surgeons are being hit hard by higher operating costs, professional liability premiums, and staff costs, according to a new Medical Group Management Association (MGMA) cost survey.

Operating costs increased 12% from 2001 to 2002, while staffing costs increased 6%, and professional liability insurance jumped 26%.

One respondent said the practice’s insurance premium quote was more than its monthly revenue.

Orthopedic surgeons are trying to protect themselves by hiring more non-physician providers and other highly trained and higher paid staff in hopes that they are less likely to make mistakes.

Also affecting orthopedic practices’ bottom line is a growing proportion of Medicare patients.

Hospital margins flat

The aggregate hospital profit margin was 4.3% in 2002, compared with 4.1% in the previous year, the American Hospital Association (AHA) reports. A third of hospitals continued to experience negative margins.

While income remained even, patient volumes increased. Admissions were up 2% to 34.1 million, and total aggregate patient days rose by 2%. Emergency visits increased by 4% to 110 million. The average length of stay remained unchanged at 5.1 days.

The figures are from a survey of more than 5,000 hospitals published in AHA’s Hospital Statistics, 2004. The book is available by phoning 800/AHA-2626. ❖
Patients with sleep apnea or sleep-disordered breathing are more susceptible to anesthesia complications, including difficult intubation, respiratory arrest, and even death.

A new study finds about 5% of elective surgery patients have sleep-disordered breathing. At highest risk are men and those who are obese—a population that is rapidly increasing.

What is needed to manage sleep apnea patients safely? Is it safe for these patients to have outpatient surgery?

Though some researchers believe these patients are poor candidates for ambulatory procedures, other experts say sleep apnea patients can undergo outpatient surgery—but only if the procedure is relatively superficial, is performed early in the day, and the patient receives minimal or no opioids and sedation.

Nurses who assess patients preoperatively should know how to assess patients for sleep disorders. And all nurses who care for surgical patients should be aware of how the risks can be managed.

**Definition, prevalence, and risk factors**

Obstructive sleep apnea occurs when the soft tissues in the upper airway become constricted and close repeatedly during sleep. Apnea is clinically defined as lack of breathing for more than 10 seconds, and sleep apnea syndrome is defined as 30 or more episodes of apnea during 7 hours of sleep.

Sleep apnea is associated with loud snoring, sudden awakening with choking, and low oxygen levels in arterial blood. The bed partner may notice apneic episodes or restlessness during sleep. This sleep disturbance causes excessive daytime sleepiness. Long-term outcomes can include high blood pressure, cognitive problems, car accidents, and occupational injuries. Signs of sleep apnea are similar in adults and children.

Clinically significant sleep apnea may affect 1% to 4% of middle-aged people in the U.S. Some 16 million cases remain undiagnosed. The magnitude of the problem was highlighted at the 2003 meeting of the American Society of Anesthesiologists in a study led by Piotr K. Janicki, MD, PhD, DSci, professor of anesthesiology at Hershey Medical Center, Penn State College of Medicine, Hershey, Pa. Among 16,000 elective surgery patients questioned preoperatively about sleep problems, he found 4.8% had sleep-disordered breathing.

The terms obstructive sleep apnea and sleep-disordered breathing are not really interchangeable. Obstructive sleep apnea is merely the most common type of sleep-disordered breathing. Sleep studies are required for a clinical diagnosis of sleep apnea.

**Risks of anesthesia**

Anesthesia, preoperative sedatives, and postoperative opioids reduce activity of the pharyngeal muscles. In patients who already experience airway closure during sleep, anesthesia may increase episodes of sleep apnea while preventing the defense mechanism of waking up to breathe. Intubation can also cause swelling and narrowing of the airway.

In Dr Janicki’s study, difficult airways, difficult intubation, and delayed extubation were significantly more common in patients with sleep-disordered breathing than in controls.

Opioids can cause significant complications. Ann Lofsky, MD, a board member of The Doctors Company (a malpractice insurer) and an anesthesiologist in private practice in Santa Monica, Calif, published a report of eight cases of postoperative brain damage or death. All patients had had general anesthesia followed by opioids for pain, and all were discovered to have obstructive sleep apnea.

Continued on page 26
Sleep apnea risk factors

Patients at highest risk for sleep apnea are:
- middle-aged men
- obese patients, particularly those with a short, thick neck
- family history of sleep apnea
- those who smoke or use alcohol
- of Mexican, African-American, American Indian, or Pacific Islander ancestry.

Risks of ambulatory surgery

According to the American Sleep Apnea Association, ambulatory surgery is a particular concern because patients are sent home without extensive monitoring. Some researchers believe patients with sleep apnea are poor candidates for outpatient procedures.

In an interview with OR Manager, Dr. Janicki said sleep apnea patients can undergo outpatient surgery if the procedure is relatively superficial and minor.

Denise O’Brien, MSN, RN, CPAN, CAPA, clinical nurse specialist in peri-anesthesia nursing at the University of Michigan Hospital, Ann Arbor, agrees. “If a patient had a procedure where they had a regional anesthetic, they had minimal to no opioid agents and minimal to no sedation, and it’s relatively early in the day, that’s probably a patient who could safely go home.” Of course, such decisions should be individualized.

Dr. Lofsky told OR Manager that, in her experience, 90% of cases of respiratory arrest did not involve ambulatory patients but inpatients receiving opioids.

“Probably, patients who are in the hospital are getting higher doses and more frequent pain management than patients who are ambulatory, and, almost ironically, are more at risk from sleep apnea complications in the hospital than had they been at home.”

Reducing risk preoperatively

Strategies that can reduce patients’ risk include:

- asking patients about sleep-disordered breathing
- discussing other options for anesthesia (eg, regional anesthesia)
- performing sleep studies when indicated
- considering the facility’s capabilities
- flagging charts to warn about the risks of opioids
- asking patients to bring their CPAP (continuous positive airway pressure) device from home.

The anesthesiologist and nurse should ask about any sleep complaints, including snoring, awakening with gasping for breath, and daytime sleepiness, as well as previous experiences with anesthesia. Poor candidates for general anesthesia should have regional anesthesia if possible, although complications can still occur from opioids given in epidurals or spinals as part of regional anesthesia.

Sleep studies should be performed in severe cases but are expensive and time-consuming and are not usually available for surgical patients. “We cannot simply send everybody who is going for surgery and has snoring to the sleep lab,” Dr. Janicki says.

Preoperative questions help identify patients with sleep-disordered breathing more quickly and less expensively than sleep studies. “My data clearly indicate that if you just go by superficial symptoms reported by the patient, you already have an increased chance for detecting trouble during anesthesia,” he says.

“The key is identifying these patients so you can plan appropriate care both pre- and postoperatively,” agrees O’Brien. Asking a few pointed questions can help identify the patient who may have obstructive sleep apnea.

Dr. Lofsky advises that all morbidly obese patients be treated as if they have sleep apnea, but she warns that not all sleep apnea patients are obese. “Part of the danger is in patients who look completely normal who just have floppy airways that you really wouldn’t pick up unless you specifically asked them.”

Because most people with sleep apnea do not realize they have it, sleep partners should be interviewed also. Patients who already know or suspect they have sleep apnea should tell their anesthesia provider so he or she can be prepared to deal with any problems. The American Society of Anesthesiologists has a patient-education brochure on the subject (www.asahq.org/patientEducation/sleepApnea.pdf).

A facility should consider its capabilities when considering ambulatory surgery for patients with obstructive sleep apnea. Ask if the facility has the equipment and personnel to handle that type of patient, O’Brien suggests.

Facilities should flag the charts of sleep apnea patients to warn about the risks of prescribing opioids. Opioids should be avoided in outpatients.

Postoperative management

Patients with sleep apnea will benefit from:
- use of a CPAP device in the post-anesthesia care unit
- reduced or no opioids
- careful monitoring
- a low threshold for admitting ambulatory patients to the hospital
- admission to the ICU if necessary.

Controlling pain without risking respiratory depression is problematic in patients with sleep apnea. O’Brien advocates regional anesthesia as an alternative.

Monitoring should continue for at least a few hours until the effects of anesthesia and sedatives wear off. Patients receiving postoperative opioids should be monitored for oxygen saturation and respiratory status. Patients having ambulatory surgery should be admitted for overnight or longer observation if necessary.

Some monitoring techniques have
Cost implications

Identifying patients at risk is the best solution for patient safety and cost-effectiveness, Dr Janicki explains, "If you think about a lot of these procedures, the whole idea is to discharge the patient home quickly. If we don’t know which patients are at risk, then we are increasing the chances the patient will stay longer. So it makes economic sense to try to figure out who actually needs to be admitted or who needs to be monitored.”

He continues, “You cannot put everybody with sleep apnea in the intensive care unit, not even in the intermediate care unit, because the costs will be staggering.”

Most people with sleep apnea do not realize they have it.

Obesity means increase in sleep apnea

With the explosion of obesity, sleep apnea problems will increase. Dr Janicki notes that problems with anesthesia are “exponentially increasing in the morbidly obese population, and this is not something that was seen 10 years ago.”

Aggressive pain management may be contributing. Dr Lofsky speculates that respiratory arrest in patients with sleep apnea is “probably one of the side effects, an unanticipated problem that we’re sort of unmasking.” Procedures are changing accordingly. Previously, “it was not substandard to send these patients to the ward unmonitored, because that’s what everybody did,” she says. Now the standard is slowly changing as awareness increases.

New devices may allow patients to diagnose sleep-disordered breathing at home. These usually consist of a nasal cannula attached to a recorder. The device measures indices such as the frequency and loudness of snoring and oxygen saturation in the blood, and the disk is sent to the manufacturer for analysis. These simplified sleep studies may reduce the need for expensive laboratory testing.

Need for further study

Dr Janicki has observed “tremendous interest” in sleep apnea. “Everybody agrees further research is needed, and it’s absolutely critical for the safety of these patients.”

Current data on sleep apnea are controversial because of discrepancies in diagnostic criteria and types of procedures among studies. Because previous trials were retrospective, prospective studies with larger populations are needed, but it is difficult to secure funding.

More specific criteria are needed to identify patients with sleep-disordered breathing, in particular, the small percentage who may actually have complications during anesthesia. Dr Janicki hopes for a simplified test or simplified diagnostic criteria for this purpose.

Standard procedures for anesthesia and monitoring are also needed. O’Brien believes, “If it’s left up to the individual [clinician], it could be, ‘I had a bad experience, so therefore I’m always going to do this a certain way,’ or ‘I’ve never had a problem, so I don’t see it being an issue,’ and we have to get past that; we have to go with the evidence.”

How can we provide patients with the services they need in the safest way? The solution, she says, is using the evidence, bringing together the experts, building consensus, and establishing good protocols.

—Laura J. Ninger, ELS

Resources


Health Policy & Politics

Congress fails to protect overtime pay

Under pressure from the White House, Congress on Nov 21 removed an amendment from the 2004 Labor HHS spending bill that would have protected nurses and other workers from proposed new regulations that would exclude many workers from overtime pay. The new rules could go into effect soon.

Nursing organizations, including the Association of periOperative Registered Nurses, wrote the labor department last year about concern the rule will make more nurses exempt from overtime pay. That would enable employers to require nurses to work “mandatory overtime” without additional pay, which nurse leaders say would worsen the nursing shortage. The organizations asked for an extended comment period so nurses could provide more input. But the White House wanted to move ahead.

—www.capitolupdate.org

Reforms called for after nurse confesses to killing patients

Policy makers are calling for reforms in screening of nurses for employment after a 43-year-old nurse, Charles Cullen, confessed to killing as many as 40 patients over a 16-year career at hospitals and a nursing home in New Jersey and Pennsylvania.

Cullen has been charged with attempted murder of a 40-year-old woman and a 68-year-old priest at Somerset Medical Center in Somerville, NJ. The causes of death appeared to be lethal doses of digoxin.

Although Cullen had been fired or resigned from previous jobs under suspicion, other hospitals who hired him said they could learn little about his background because of previous employers’ reluctance to share information. Nor is there a publicly accessible database on actions against nurses.

“What is coming increasingly into focus is a fragmented employment system plagued with gaps and disconnects, sorely lacking in checks and balances, and crippled by the fear of litigation,” Modern Healthcare reported.

New York Governor George Pataki said he would propose legislation to require credentialing of all licensed health care professionals who provide direct patient care in the state’s health care facilities as well as other reforms.

U S senators from New Jersey called for congressional hearings on the nationwide system for screening health care professionals. They asked a Senate committee to investigate the case and possible federal responses.

Nursing workforce funds on hold

Senate action on the big 2004 appropriation bill, which includes nursing workforce development funds, was not expected until late January. The House approved the bill on Dec 8, but the Senate decided to wait to act until it returned from its recess Jan 20.

The bill provides funding for the Department of Health and Human Services as well as 10 other federal departments.

If the Senate approves, nursing workforce funds would rise by 27% for 2004. That would be the largest single-year increase in 30 years. But the $143 million is still $20 million short of the amount favored by a coalition of 17 health care organizations.

In the meantime, the Health Resources and Services Administration is accepting applications for scholarships funded by the legislation at www.hrsa.gov/grants/preview.

—www.capitolupdate.org

Hospitals get relief in Medicare bill

The new Medicare reform law signed in December provides funding relief sought by the American Hospital Association, which lent its support to the bill. Hospitals will get a full inpatient update for 2004. But to get a full update in 2005 through 2007, hospitals will have to submit data on 10 quality indicators. Congress also approved relief for rural and teaching hospitals plus hospitals that serve a large number of poor and uninsured.

—www.hospitalconnect.com

Congress calls for study on payment for certified RN first assistants

As part of the Medicare reform legislation signed by President Bush in December, Congress called on the Medicare Payment Advisory Commission (MedPAC) to study whether Medicare should pay for services of certified RN first assistants (CRNFAs). The study is to be submitted to Congress by Jan 1, 2005. CRNFAs are defined in the law as RNs who have completed a minimum of 2,000 hours of first assisting and are certified by an organization recognized by the Secretary of Health and Human Services. CRNFAs are certified by the Certification Board Perioperative Nursing, Denver.

—www.thomas.loc.gov

Search for H R 1. See Sec 643.

Fine-tuning site marking

How some organizations are refining their process for surgical site verification

During preoperative visits, the staff at Palomar Medical Center in Escondido, Calif, noted discrepancies in surgical site information they received from physicians’ offices. In some cases, the wrong procedure was listed or the incorrect site or side was written in surgical consents. Histories and physicals were incorrect, and patient education was lacking.

To help improve communication, Palomar’s perioperative staff, led by Rita McCool, RN, manager of the postanesthesia care unit and outpatient surgery, developed a reference manual with patient education resources, instructions for the day of surgery, and other information. The manual includes a surgical site verification checklist for office staff to use in their medical record.

“We organized a breakfast and luncheon for the office staff to distribute the manuals and educate the staff about the importance of surgical site verification,” says Barbara Bateman, RN, MBA, CNOR, director of perioperative services.

An annual breakfast or lunch is planned to continue the education.

Perioperative staff kept a log of the office staff who received the manuals and fax them any updated pages.

A performance improvement (PI) tool was developed to track variances in information received from offices and plan education for the office staff. The perioperative staff meet with office staff as needed and when requested by the surgeons. The PI results are reported quarterly to the OR committee, with names removed, and sent to the appropriate departments for information.
New benchmarking data for ASCs

Larger ambulatory surgery centers (ASCs) appear to have lower operating costs per case than smaller ones, according to a new report.

ASCs with 5,000 or more cases a year had a median total operating cost per case of $658. That compared with $895 for ASCs with less than 2,000 cases a year, according to the annual survey by the Medical Group Management Association (MGMA) and the American Association of Ambulatory Surgery Centers (AAASC).

The survey examines financial performance and productivity, with data on indicators such as charges, revenue, staffing, and operating costs. MGMA says the data can be used for benchmarking and improving performance.

In the survey, 38% of the facilities were single specialty, and 62% were multispecialty.

Among findings:
• Physician-owned ASCs had fewer median accounts receivable (A/R) over 90 days, 18.9%, compared with 20% for ASCs that are partially or wholly owned by an outside entity such as a joint venture, a hospital or health system, or an enterprise operating in multiple markets.
• ASCs owned by outside entities used a higher proportion of RNs per operating room (3.5) than respondents in general (3.25) or physician-owned ASCs (3.0).
• Total administrative staff per 1,000 cases varied widely from 0.6 to 3.3 FTEs, with a median of 1.8.
• Physician-owned facilities had a somewhat higher median number of total administrative staff per 1,000 cases (1.96) than facilities owned by other types of entities (1.57). Multispecialty ASCs had a slightly higher median number of administrative personnel (1.9) than single-specialty ASCs (1.4).

In all, 1,138 surgery centers that are members of MGMA and AAASC received the survey, with 113 usable responses, for a return rate of 9.5%.

The report can be purchased from MGMA by phoning 877-ASK-MGMA or visiting www.mgma.com. The price is $185 (members) or $340 (nonmembers).

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 Oct 6 to 8 in Chicago.

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

In recognizing an individual manager, the award honors all OR nurses for their important role. 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. The winner will be notified in August.

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

Please see the ad for TVL HEALTHCARE in the OR Manager print version.
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The monthly publication for OR decision makers

At a Glance

Care of severely obese costly for hospitals

Hospitals are being forced to buy specialized equipment and in some cases remodel their facilities to care for the growing number of severely obese patients. Costs can reach $500,000 per year, according to a survey by Novation, the group purchasing organization.

Hospitals are seeing more severely obese patients (at least 100 pounds overweight), and their care has become a worker safety issue. If hospitals don’t have the right type of equipment, transporting or moving obese patients can injure hospital staff.

Of survey respondents, 53% said costs incurred in treating obese patients increased the cost of care for others, 17% said they remodeled their facilities to accommodate obese patients, and 41% said they changed patient procedures to accommodate more obese patients.

Off-pump CABG has lower graft patency, new study finds

Though off-pump coronary artery bypass graft (CABG) surgery is as safe as on-pump surgery and causes less myocardial damage, graft patency is lower at 3 months in the off-pump group, finds a randomized study comparing the two techniques. The authors say the findings have implications for the long-term outcomes of off-pump CABG surgery.

Nonrandomized studies have consistently shown excellent patency rates for off-pump surgery, but most of these studies involved patients receiving one or two grafts. The patients in this study had an average of more than three grafts.

At 3 months after surgery, 98% of grafts were patent in the on-pump group, compared with 88% in the off-pump group. The area of the left anterior descending artery, which is the main artery of the heart and also the easiest area to graft off pump, also had a lower rate of patency in the off-pump group. Radial-artery grafts were the most vulnerable conduits in the off-pump group.

Looking at possible reasons for the reduced patency, the researchers concluded that a more selective approach to the target vessel might yield better results for off-pump surgery. They operated on an unselected population, many of whom had diseased target vessels.


Should AAA surgery be done by general surgeons?

A growing body of literature suggests only highly trained vascular surgeons should be allowed to perform abdominal aortic aneurysm (AAA) repair, according to the Dec 30 Wall Street Journal.

The overall mortality rate for AAA averages about 5%. But when general surgeons perform the surgery, the mortality rate is 76% higher than when vascular surgeons do it, according to a University of Michigan/Johns Hopkins study. General surgeons perform about 30% of the 60,000 AAA cases each year.

Vascular surgeons want the American Board of Medical Specialties to make vascular surgery a separate specialty with its own certification. Their request was rejected last year but appealed. Letters from both sides continue to pour into the board’s office, the Journal reported.

A change in policy could take hundreds of millions of dollars a year from the pockets of general surgeons and create a business windfall for vascular surgeons. Vascular surgeons say their motivation is successful medical outcomes, not profit.


Laparoscopic appendectomy patients fare better

Patients who have minimally invasive appendectomies fare better than those who have the traditional open procedure, find researchers from Duke University, Durham, NC. A review of studies involving almost 44,000 patients found laparoscopic patients had a shorter hospital stay, lower rate of infections, fewer complications, and went back to work sooner.

Despite stringent aseptic technique, the wound can become infected when the appendix is pulled through the incision of an open procedure. The higher infection rate from open surgery may be why those patients stay in the hospital longer.

In the laparoscopic procedure, the appendix is placed in a tiny sterile bag before it is pulled to the outside. The bag cannot be used in the open procedure.