Cost control

Cost data comparisons help sway surgeons to standardize supplies

As payment models move from fee-for-service to value-based care, hospitals and healthcare systems are trying to reduce spending by 20% to 30% to maintain their budgets. Supply costs are usually the second largest expense after labor, and industry analysts predict they will take the top slot by 2020.

In 2013, surgical services throughout Intermountain Health, a 22-facility system based in Salt Lake City, Utah, was charged with supporting their system’s shared accountability goal to reduce the direct costs of healthcare.

“This is how we came up with the Surgical Pricing Reduction Initiative and New Growth (SPRING) project,” says Jeannette L. Prochazka, MSN, RN, ACNS-BC, clinical operations director, surgical services clinical program, Intermountain Healthcare.

SPRING realized a reduction in direct costs of more than $16 million in 2013 and $43 million in 2014. By 2016, Intermountain will provide quality care to patients and control costs to keep insurance premiums for its insurance

Continued on page 9

Regulations

Hospital accreditation options expand beyond Joint Commission

In the past, most hospitals automatically sought accreditation from the Joint Commission, but recent years have brought new players to the field, prompting hospital administrators to rethink that strategy. One relatively new player is DNV GL-Healthcare (DNV GL). Since achieving deeming authority from the Centers for Medicare & Medicaid Services (CMS) in 2008, DNV GL has made inroads into Joint Commission territory, with some hospital leaders, including OR managers, viewing the company as more user-friendly and less punitive than the Commission.

“DNV GL takes a fresh look at accreditation,” says Vivian Ho-Nguyen, director of accreditation & regulatory affairs at Harris Health System in Houston, Texas. The system, which includes three hospitals and 16 clinics, has been DNV GL accredited since July 2013.

Continued on page 13
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Five years have passed since the Institute of Medicine recommended changes in nursing education and practice. Soon after the IOM issued its report, The Future of Nursing: Leading Change, Advancing Health, the Robert Wood Johnson Foundation (RWJF) partnered with AARP to launch the Future of Nursing: Campaign for Action to help implement the IOM’s recommendations.

What progress has been made, and what remains to be done? The IOM is undertaking a new study to assess the impact of its report and the campaign.

The IOM’s key recommendations in 2010 were to:

• remove scope-of-practice barriers
• expand opportunities for nurses to lead and diffuse collaborative improvement efforts
• implement nurse residency programs
• increase the proportion of nurses with a baccalaureate degree to 80% by 2020
• double the number of nurses with a doctorate by 2020
• ensure that nurses engage in lifelong learning
• prepare and enable nurses to lead change to advance health
• build an infrastructure for the collection and analysis of interprofessional healthcare workforce data.

IOM committee meeting
On May 28, the IOM’s Committee for the Evaluation of the Impact of the IOM Report heard from stakeholders who have analyzed data or supported programs to advance nurse education. Panelists represented research groups, academia, professional nursing and physician organizations, and healthcare agencies. Here are highlights from their sessions.

The first panel represented researchers who have been gathering and evaluating data on behalf of RWJF. Among these is the Interdisciplinary Nursing Quality Research Initiative (INQRI). Spokesperson Mary Naylor, PhD, RN, FAAN, of the University of Pennsylvania School of Nursing, Philadelphia, said INQRI has funded eight research teams that are investigating areas such as:

• the return on investment for increasing bachelor’s-prepared nurses
• how nurses can develop and use data to inform policy change
• the role of federal policy in the future scope of practice regulations for advanced practice nurses.

Thus far, Naylor said, multiple studies have linked nurses with a bachelor’s of science in nursing (BSN) to better patient outcomes and lower costs. INQRI plans to send its recommendations to the IOM by July 1. Findings of INQRI studies and how they relate to the IOM recommendations are available at www.inqri.org.

Another research firm, TCC Group, has been examining the work of state action coalitions. According to Kate Locke, MPH, associate director of evaluation, TCC Group has found the RWJF campaign has resulted in:

• a breakdown of barriers between associate’s degree and bachelor’s degree programs
• new leadership in some states and collaboration with non-nursing stakeholders such as the partnership between RWJF and AARP
• an easier pathway for new nurses to obtain their bachelor’s degrees.

Status of nurse education
Panelists representing education and training stakeholders generally agreed that much progress has been made, for example, an increases...
Many perioperative services leaders still struggle to get meaningful data on what influences the success or failure of a surgical patient. One resource that’s readily available and has a proven track record is the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP).

“NSQIP has shown that the use of accurate, rigorous, standardized data helps you evaluate how you’re doing and improve your care,” according to Clifford Ko, MD, MS, MSHS, FACS, director, division of research and optimal patient care, at the ACS in Chicago. “When we compared registry data to claims data, we found that claims data has an accuracy of about 25%. It’s not good enough to use claims data to measure how we’re doing in surgery.”

Dr Ko, director of ACS NSQIP and a colon/rectal surgeon and professor of surgery at the University of California Los Angeles School of Medicine, will be a keynote speaker at this year’s OR Manager Conference, October 7-9, at the Gaylord Opryland in Nashville. The 2015 Becker’s Hospital Review named Dr Ko as one of 50 experts leading the field of patient safety in the US.

Getting better data

ACS NSQIP was started about 10 years ago after studies of Veterans Administration hospitals found that more rigorous data collection correlated with actual outcomes. Previously, mortality rates at Veterans Health Administration (VA) hospitals had been seemingly higher than at non-VA hospitals, Dr Ko told OR Manager. However, after comorbidity data were collected in a more accurate, standardized manner and mortality rates were risk adjusted, it became clear that mortality rates weren’t any worse at VA hospitals.

Not only that, but providing ongoing feedback to VA hospitals led to lower mortality and using more robust data leads to better outcomes

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complication rates, shorter length of stay, and higher patient satisfaction, according to Dr Ko. A grant from the Agency for Healthcare Research and Quality (AHRQ) funded research to test whether the VA model of data analysis was transferrable to the private sector, and that was the beginning of ACS NSQIP. Today, more than 600 hospitals participate in the program.

**Predicting outcomes**

As part of ACS NSQIP, hospitals have a designated surgical clinical reviewer who is trained by the ACS to collect data that is entered into the NSQIP database. Twice yearly, administrators and surgical services staff receive a comprehensive report so they can compare their risk-adjusted surgical outcomes to other participating sites.

Risk-adjusted 30-day morbidity and mortality outcomes are computed for each participating hospital. In addition, ACS NSQIP hospitals’ data are reported on the Centers for Medicare & Medicaid Services’ (CMS) Hospital Compare website.

A preoperative risk calculator tool compiles information to project the likelihood of various outcomes from procedures. “The risk calculator was developed using thousands of CPT codes,” Dr Ko says. “For the majority of inpatient CPT procedures, we can predict how patients will do based on the NSQIP data.”

To use the risk calculator, which is also open to non-NSQIP members, a user simply inputs the CPT code or procedure name as well as risk factors such as age, gender, and comorbidities. From that information, the risk calculator estimates the risk of mortality, infection, or other outcomes for that individual patient (http://riskcalculator.facs.org/).

**Aligning programs**

The CMS has adopted use of the risk calculator as a performance measure for the Physician Quality Reporting System, Dr Ko notes. CMS also uses the NSQIP-developed elderly surgery measure, which looks at outcomes in those aged 65 and older. “It’s risk adjusted and procedure mix adjusted, so hospitals performing complex surgeries in the elderly aren’t penalized for doing difficult operations,” Dr Ko explains.

An Annals of Surgery study published online in February found that among hospitals currently participating in ACS NSQIP for at least 3 years, 69% reduced the rate of death; 79% reduced the rate of complications; and 71% reduced the rate of surgical site infections. Dr Ko was one of the study’s coauthors.

Some ACS NSQIP hospitals belong to collaboratives, or groups that share best practices, quality improvement initiatives, or compare surgical outcomes. “We have more than 30 collaboratives—regional, state, or topic-based, such as ERIN (enhanced recovery in NSQIP),” Dr Ko says. “They can learn from each other, network, and share data, successes, and failures—by and large, these hospitals tend to improve better than if they were working on their own.”

The next steps, he says, include figuring out how to employ technology and informatics to further gain efficiencies in obtaining accurate data for improving the delivery of high-quality, safe, and reliable surgical care.

In April, ACS NSQIP received one of the Joint Commission’s 2014 John M. Eisenberg Patient Safety and Quality Awards for its data collection achievements to help improve surgical patient care. ✤

—Elizabeth Wood

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The number of nurses are pursuing bachelor’s and advanced degrees.

Since 2010, 38 new entry-level BSN programs have opened nationwide, and enrollment in these programs has increased 17%, from 161,540 to 189,729 students, said Eileen T. Breslin, PhD, RN, FAAN, president of the American Association of Colleges of Nursing (AACN).

“In the past 5 years, the number of schools offering accelerated baccalaureate nursing programs has increased from 231 to 293, and enrollment has increased 24%, from 13,605 to 16,935 students,” she said. Even more remarkable, she noted, since fall 2010, enrollment in doctor of nursing practice (DNP) programs has increased 161%, from 7,037 to 18,352.

According to an employer survey conducted by AACN, the percentage of employers requiring new RNs to have a baccalaureate degree has risen from 30% to 45% since 2011, and the number of employers who prefer to hire RNs with BSNs also has increased. However, Breslin said, scope of practice barriers remain an issue.

“BSNs are often not fully utilized in all facilities,” she said. “We could consider new ways to credential and/or license BSN nurses, and we suggest the IOM convene stakeholders at the federal, state, and local levels to look at scope of practice concerns.”

Other panelists echoed concerns about scope of practice, advocating for both greater autonomy and better teamwork between nurses and other healthcare professionals. Concerns also were voiced about the cost of education, the lack of compensation for the time nurses take from work to complete their education, and the lack of access in remote areas to universities or even to online programs.

Models for the future

“The key is to build on the foundation community college programs and ensure the majority of our students progress directly to a BSN,” said Donna Meyer, MSN, RN, chief executive officer of the Organization for Associate Degree Nursing. Meyer said dual enrollment programs in Kansas and New Mexico allow students to attend both community college and university, earning about 90 credit hours from the community college and 30 credit hours from the university, as a way to increase the number of BSNs.

Mary Lou Rusin, EdD, RN, ANEF, chair, Accreditation Commission for Education in Nursing, said that in 2014, New York State graduated more nurses with bachelor’s degrees than with associate’s degrees—for the first time ever.

“From 1960 to 2000, only 20% of associate degree graduates continued on to a bachelor’s,” she noted. “In 2013, 36% of all BSN graduates were RNs. However, this won’t be high enough in New York State to meet the increased demand for bachelor’s-prepared nurses or to meet the IOM recommendation by 2020.”

At the end of the panel presentation, one committee member said the IOM report implies that the bachelor’s degree will become the standard for entry into practice for new nurses. For nurses pursuing BSNs later in life, it’s more economically challenging. “What expectations and what role do you see for entry at the associate degree level and continuation to the bachelor’s degree while in practice versus making the bachelor’s degree the entry credential to practice for people entering nursing education now?” he asked.

Rusin suggested mandating that a baccalaureate degree be obtained within a specified time period after graduating from an associate degree program. “I believe the community colleges provide the opportunity for students to attend a nursing school that’s more affordable. If we moved toward a baccalaureate level of entry, I’m fearful we wouldn’t have even the diversity that we have in the profession now,” she said.

“I think a lot of people cannot start at a university level, and find comfort in starting at a community college,” said Marsha Howell Adams, PhD, RN, CNE, FAAN, ANEF, president of the National League for Nursing. “We’ve got to facilitate academic progression, but keep the rigor,” she said. And, she added, a strong workforce depends on having strong nursing faculty with either research-based or clinical-based doctorates. “We can’t advance the health of the nation without nursing faculty.”

The committee meeting was intended as an information-gathering session; the IOM plans to issue another report in the future.

Stay tuned for more on nursing education. And to learn how one facility is tackling OR nurse education, see p 18 in this issue. ✤

—Elizabeth Wood
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Cost data
Continued from page 1

plan, Select Health, at an increase of only 1% above the consumer price index.

SPRING was built on the principles of Brent James, MD, in his Advanced Training Program through the Intermountain Institute for Healthcare Leadership, says Prochazka. “Under his direction, we know if you decrease variation, you will lower costs and have better outcomes.”

The SPRING team looked at high-volume, high-variation surgical procedures for variation in supplies and their effect on outcomes, and then they provided surgeons and staff with information on supply alternatives. They also developed and implemented a standardized Doctor Procedure Card (DPC) process to raise awareness of the staff’s and surgeons’ impact on supply consumption.

“The word ‘procedure’ was used instead of ‘preference’ because the cards are no longer based solely on physicians’ preferences,” says Prochazka.

Backing up the program is a sophisticated enterprise data warehouse supported by developers, data analysts, and data architects.

Clinical programs
The SPRING team adopted clinical programs as a way to disperse information and implement initiatives throughout the system. Clinical programs provide support from physicians and operations personnel throughout change processes.

There are 10 clinical programs and seven clinical services (sidebar above). The only differentiation is the programs are related to disease processes, and the services cross all clinical programs. One is not independent of the other.

The surgical services program is made up of physician development teams (top sidebar, p 10). “We work with them to identify best practices and suggestions on how to implement the new practice,” says Prochazka. The physician development teams, in turn, partner with 14 workgroups to help with implementation (bottom sidebar, p 10).

The clinical program holds guidance council meetings twice a year at each facility with SPRING nurses, OR staff, surgeons, and OR managers. The group talks about the initiatives under way with the clinical program and all ongoing SPRING projects.

“It’s an opportunity for the surgeons to hear the staff’s questions and for the staff to hear and see the data the surgeons are being shown,” says Ann Z. Putnam, MSN, BSN, CNOR, SPRING project manager, Intermountain Healthcare.

“In those meetings, we show unblinded data,” says Putnam. “Initially we didn’t have a great turnout with the surgeons, but after word got out that we were posting their names up on a screen, and they weren’t there to defend themselves, they all started coming.”

SPRING launch
In today’s healthcare environment, patients have accessibility to cost information and are asking questions. They want to know how much a surgical procedure is going to cost before they have it.

“Because of this, we wanted to be proactive and start giving the surgeons the cost information they needed so they could have better conversations with their patients,” says Putnam, who began structuring the SPRING project in 2013, shortly after she arrived at Intermountain Healthcare.

However, when Putnam was ready to start sharing supply cost information with surgeons and staff, she found it was legally not that simple. Many supplier con-

Continued on page 10
tracts prevented Intermountain from sharing cost information. Capitalizing on a strong relationship with their supply chain, the clinical program worked collaboratively with the legal department and identified the steps to take to make costs more transparent, which involved renegotiating contracts.

Putnam developed the DPC tool, which she calls a “physician procedure card on steroids.” Originally the DPC tool was designed as an iPad app that showed the different costs of supplies on different DPCs throughout the Intermountain system. The surgeons liked what she was doing and wanted access to the app. Today the application is web based and accessible throughout the system, showing costs of supplies on any DPC and costs of similar supplies. The app also allows nurses to change and update DPCs.

In January 2014, OR staff at all of the hospitals in the system were trained on the DPC tool.

Data sharing
“The DPC tool alone is not what’s helping us achieve our goals,” notes Putnam. She says they are also building an arsenal of reports with the help of their data analysts and data architects, using data to build case studies with outcomes, and working with supply chain personnel on utilization and opportunities for renegotiating contracts.

“Sharing data isn’t just about sharing costs per case, it’s about a marriage of costs and outcomes,” says Putnam.

For example, the variation in cutting devices used by surgeons for tonsillectomies and adenoidec-
tomies was analyzed in a case study of 23,000 patients in the Intermountain Healthcare system. There is a significant variation in the cost of the different devices used, and the SPRING team wondered if that cost difference affected outcomes. The case study revealed no statistical difference in outcomes between the different devices, and this information was presented to the surgeons.

After talking with one another, the surgeons started making changes related to what cutting device they use. “It wasn’t nurses, or supply chain personnel, or business managers trying to have this conversation with the surgeons. It came from the surgeons asking each other why they were using the more expensive device,” Putnam says.

The difference between the Intermountain cost-per-case data and data used in other systems is the process for creating the definitions needed for the procedure cohorts, says Putnam. Currently there are 105 cohort definitions built into the system, and Putnam says they hope to double or triple that number by the end of 2015.

“With input from the surgeons, we define what is included in a procedure group. That definition is then used in all of the SPRING reports, outcomes reports, and other reports,” says Putnam.

The SPRING report shows OR time, number of OR staff, supply costs (breaking out implants separately), and variable costs such as nursing, lab, imaging, and any other aspect of utilization. “With the SPRING report,” says Putnam, “I can drill down to different supply categories and see, for example, that one surgeon is using different endomechanical supplies than other surgeons and what his costs are compared to the other surgeons.”

This report is invaluable in engaging a conversation with surgeon outliers, she says. “I can say: ‘You are an outlier because of this device you are using. You are using this, and no one else is.’”

Graphs showing a surgeon’s trends can be printed from the report. These show room time, surgery time, case volume, supply costs and charges, and total charges and reimbursement for a particular procedure. “These are so critical when the surgeon...”

Continued on page 12
wants to know: ‘What are my patients getting charged for this? Am I making a difference? Am I lowering costs?’” says Putnam (sidebar, p 11).

Outcomes report
The outcomes report shows data on the same procedure cohorts for which the surgeons see cost and case data. Data include length of stay, when patients are discharged, readmissions, pre-existing conditions, and patient-reported outcomes. Because the reports run off the same cohort, surgeons can see if their outcomes are different from those of other surgeons.

Item explorer report
The item explorer report displays which surgeons are using a particular item, on which procedures, and how frequently. The report also displays a potential savings if a change is made. “We can review the data with the surgeons and show them the opportunities they have for savings,” says Putnam.

DPC tool
OR staff and surgeons use the DPC tool during every case. They can see supply costs, search for alternatives, and edit the card in the OR. Staff have access to all DPCs in the Intermountain Healthcare system.

The DPC has a history button that shows every change ever submitted for a card. “Now when the doctor says, ‘My cards never get updated,’ I can pull up the card and say, ‘Yes, they were, and here is when they were updated,’ or ‘You are right, they weren’t updated,’” says Putnam.

Other features include an icon to add or delete an item from a card, a replace icon that shows alternatives for an item, and a look-up button that allows a user to, for example, see all of the endoclips used in the Intermountain system. One hospital might use very expensive endoclips, and all of the other hospitals use a less expensive option. Inventory specialists can use this information to make changes.

The tool also has a message center where nurses can post messages, such as: “This new sinus balloon is no longer being covered by this insurance—please let the ENT surgeons know.”

Future enhancements to the tool include highlighting preferred items. “We don’t want staff to automatically select the least expensive alternative when replacing an item on the card,” says Putnam, “or we will never meet our vendor commitments.”

Also to be added are inventory information and utilization, such as the last time an item was used.

After the DPC tool rolled out and the staff learned how to use it, Putnam says, staff members told her the tool gave them information they never had before. In 2013, there were around 6,000 changes to DPCs across the system. After implementing an application that provides access to cost information and comprehensive reports showing variation, staff made more than 32,000 changes on DPCs in 2014.

The hard work does not end here; the SPRING team is working to reduce direct costs by another $22 million in 2015.

—Judith M. Mathias, MA, RN

Reference
Putnam A Z, Prochazka J L. Delivering high-quality health care for low cost: Rethinking the way we look at supplies in the OR. OR Business Management Conference 2015.
“It’s a partnership, and it wasn’t like that with the Joint Commission,” Ho-Nguyen says. “DNV GL is a model that has transformed the mundane work of accreditation into something fresh and new, so we can deliver more efficient and better quality care to our patients.”

Leaders have to do their homework to determine which accreditation best fits their organization, and that includes understanding how DNV GL and the Joint Commission compare (sidebar). Given that most OR managers are familiar with Joint Commission surveys, this article focuses on DNV GL as an alternative.

From maritime safety to healthcare

DNV GL-Healthcare’s parent company, the DNV GL Group, primarily an independent foundation, traces its origins back to Norway in 1864, when it began evaluating the seaworthiness of ships. DNV GL started US operations in 1898 and is now working in many industry sectors. In 2007, DNV GL acquired TUV Healthcare Specialists and started pursuing deeming authority from CMS.

Patrick Horine, MHA, president and chief executive officer at DNV GL-Healthcare (referred to as DNV GL in this article) has worked in accreditation for a number of years, including consulting with hospitals to help them prepare for Joint Commission accreditation. His experience

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<table>
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<tr>
<th>Factor</th>
<th>The Joint Commission</th>
<th>DNV GL Healthcare, Inc</th>
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<tbody>
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<td>Accredited or certified hospitals</td>
<td>More than 4,400</td>
<td>More than 400</td>
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<td>Organizational structure</td>
<td>Not-for-profit, with two not-for-profit subsidiaries</td>
<td>For profit</td>
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<td>Deeming authority from Centers for Medicare &amp; Medicaid Services (CMS)</td>
<td>Granted 1965 when Medicare was created; after Congress removed automatic deeming authority in 2008, the Commission applied for authority and received in 2009</td>
<td>Involved in healthcare accreditation as DNV GL Healthcare since 2007; since 1990 for healthcare organizations worldwide</td>
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<tr>
<td>History</td>
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<td>Independent foundation</td>
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<tr>
<td>Governance</td>
<td>Includes Board of Commissioners with physicians, nurses, healthcare executives, and consumer representatives</td>
<td>Offers stoke and managing infection risks; others are planned</td>
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<tr>
<td>Specialty certification</td>
<td>Offers several, including stroke</td>
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<tr>
<td>Frequency of full survey</td>
<td>Every 3 years, with an annual self-assessment by the hospital</td>
<td>Conducts annual surveys as part of a 3-year accreditation cycle</td>
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<td>Standards</td>
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<td>Based on CMS Conditions of Participation and International Organization for Standardization’s ISO 9001</td>
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<td>Accredited, nonaccredited, or jeopardy status</td>
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<td>Percentage of hospitals awarded full accreditation in 2013</td>
<td>98%</td>
<td>98%</td>
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<td>Disparity rate for hospitals*</td>
<td>41% in 2013 and 45% in 2012</td>
<td>64% in 2013 and 44% in 2012</td>
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*Disparity rate is a measure of how well the accrediting body performs by calculating how many deficiencies were missed according to a follow-up validation survey; a lower percentage means better performance. The DNV GL percentage may be slightly skewed because of the larger volume of Joint Commission reviews.

Sources: The Joint Commission, DNV GL, CMS financial report for FY 2014.
Continued from page 13

led him and a partner to start an accreditation program that offered an alternative to the Joint Commission. “We saw that hospitals weren’t sustaining what they put in place,” Horine says. “We wanted to look at how we could make change more sustainable.” Ultimately, DNV GL acquired TUV Healthcare Specialists, the company that had been funding the program.

Horine says one of the hallmarks of DNV GL is its approach to what he calls “changing the culture of accreditation.” The organization looks to partner with hospitals, which makes people feel less fearful of surveys. “We are engaging and collaborative,” Horine says. “We drill down to the heart of the issue and really listen to hospitals to engage the staff.”

Twofold requirements
To become accredited through DNV GL, hospitals must:

• meet CMS Conditions of Participation (CoP), which DNV GL has built into its National Integrated Accreditation for Healthcare Organizations credential
• adhere to International Organization for Standardization (ISO) 9001.

ISO is an independent, nongovernmental membership organization that develops voluntary international standards for quality, safety, and efficiency. DNV GL uses ISO 9001, which sets out the requirements of a quality management system. This standard is under review, with the updated version expected by the end of 2015. Achieving formal certification in ISO 9001 is an option for hospitals, but is not required.

John Rosing, MHA, FACHE, vice president and principal of Patton Healthcare Consulting in Phoenix, says, “DNV GL stays more true to the requirements of CoP in part because they didn’t come at it from the perspective of already having standards, as the Joint Commission did. It’s only in the past 5 to 7 years that CMS became more assertive in requiring accrediting bodies to address each and every CoP.” (Joint Commission standards are now also compliant with CoP.) Rosing adds that CMS considers all organizations with deeming authority as essentially equal (sidebar, p 15).

Horine says ISO 9001 is a good fit for healthcare because of the complexity of its processes. “When you are talking about the OR, you are talking about very process-driven aspects that have to happen, whether it’s preoperative, intraoperative, or postoperative,” he notes. “ISO 9001 helps hospitals build consistency by helping them focus on process.”

Ho-Nguyen adds, “The standards are less prescriptive than the Joint Commission’s. Less prescriptive is better because we can do things in a way that works for our organization to achieve goals.”

Donna Willeumier, MT(ASCP), MHPE, CPHQ, administrator of quality management and regulatory compliance for Advocate Health Care in Chicago, says DNV GL is unique in that it integrates the CoPs and ISO 9001. DNV GL has accredited 10 Advocate hospitals since March 2012.

“ISO 9001 is not only an international quality standard, it’s an approach that is very process driven,” she says. “You are continually assessing your processes and improving them to meet customer needs.” This approach fosters consistency and well-designed processes, which Willeumier says are characteristics of high-reliability organizations.

A kinder, gentler approach?
“DNV GL doesn’t interfere with your day-to-day operations,” says Gabrielle White, RN, CASC, executive director for ambulatory services & network development at Hoag Orthopedic Institute in Irvine, California. “It’s up to the experts in the hospital to decide on how to accomplish the goals. The Joint Commission seems more ‘one size fits all’ in its approach, but every hospital is different. DNV GL allows hospitals to achieve quality in their own way.”

White, who helped open the Hoag Orthopedic Institute and was instrumental in bringing DNV GL to the attention of administrators, adds, “We wanted to be with an accreditor who was more collaborative.” The institute was accredited by DNV GL in November 2010, and Hoag Memorial Hospital Presbyterian was accredited in January 2013. Both are also ISO certified.

Natalie Gosselin, MS, RN, CPHQ, CSSGB, director of quality and performance improvement at St Joseph Hospital in Nashua, New Hampshire, agrees with White that DNV GL’s approach differs from that of the Joint Commission. “DNV GL tells you what to do but not how to do it,” she says. St Joseph recently underwent its first DNV GL survey, which Gosselin

Donna Willeumier, MT(ASCP), MHPE, CPHQ
Regulations

says she found to be highly collaborative. She also notes that the application process was “much more streamlined” compared with that for the Commission.

Surveys are conducted annually, something hospitals embrace. “I like that they come on site every year,” Ho-Nguyen says. “It keeps you on your toes.” Different areas of the hospital are reviewed each year, so that by the end of 3 years, the entire hospital has been assessed.

By contrast, the Joint Commission conducts onsite surveys every 3 years, and through its Intracycle Monitoring Process has the following options for the years in between the triennial survey:

- A hospital can attest it has performed the required annual self-assessment (Focused Standards Assessment), but chooses not to share the data with the Joint Commission.
- A hospital can email the self-assessment to the Joint Commission and can select a conference call with the Standards Interpretation Group to discuss areas of concern or suggestions the organization might have on how to improve. There is no fee for the conference call.
- A hospital can perform the self-assessment and choose to have one or more onsite surveys (at 12 months or at 24 months). This survey is customized to focus on areas that the hospital wants to improve or for which it seeks feedback. There is a fee for this targeted survey. The customer may decide whether to receive the onsite survey feedback verbally (if there is concern about discoverability) or in written format.

Many DNV GL-accredited hospitals point to its approach to surveys as a significant advantage. “It’s a process-driven, educational approach based on continual improvement rather than simply reaching a threshold of compliance,” Willeumier says.

DNV GL sends a survey team composed of three disciplines:
- clinical—a nurse or physician who visits patient care areas
- generalist—someone with a quality management background. This surveyor’s responsibilities include review of quality management, medication management, medical staff, human resources, and support services.
- physical environment—a specialist who evaluates the environment, including adherence to the Life Safety Code.

More than one person in each discipline may be sent, depending on the size and complexity of the hospital. This team compares to the Joint Commission’s core survey team of a physician, nurse, and facilities engineer.

“We tell hospitals not to prepare for the survey,” Horine says. “We want to see how the hospital operates on a daily basis.” Hospitals accredited by DNV GL attest to the difference. “When the Joint Commission would come, there was a lot of ramping up time, and then when they walked out the door, everyone would relax,” says Chris Crawford, MHA, RN, CPHQ, vice president of quality at Lee Memorial in Fort Meyers, Florida, which includes four acute care hospitals and 18 off-site locations such as surgery centers. “Now it’s easier to sustain improvements because there is no relaxing; you’re maintaining perpetual compliance and continual improvement.” Lee Memorial became accredited by DNV GL in May 2010 and received ISO certification in December 2013.

Crawford says both DNV GL and Joint Commission reviews are rigorous, but has found that DNV GL provides more valuable recommendations. Hospitals receive reports in 10 days and must submit a corrective action plan, similar to Joint Commission requirements. “One of the main differences is that we have a relationship with people at DNV GL that we never had with The Joint Commission,” Crawford says.

Unlike the Joint Commission, DNV GL offers only one category for accreditation. Hospitals that

Other players

The Healthcare Facilities Accreditation Program (HFAP) and the Center for Improvement in Healthcare Quality (CIHQ) also accredit hospitals and have deeming authority from the Centers for Medicare & Medicaid Services (CMS).

HFAP, a not-for-profit organization, has had deeming authority for all hospitals since 1965 and accredits more than 200 hospitals. Most HFAP standards are tied to CMS Conditions of Participation, and surveys are conducted every 3 years.

CIHQ has been an accrediting organization since 2011 and accredits more than 50 hospitals. Standards are based almost exclusively (about 95%) on CMS Conditions of Participation. Surveys are conducted every 3 years, with a mid-cycle survey about 18 months into the cycle.

Continued on page 16
Alternative surveys create competition.

Ann Scott Blouin, PhD, RN, FACHE

The Joint Commission says the view that its surveyors aren’t collaborative or interested in helping hospitals improve is a misconception because the Commission has evolved over the years.

“Our board has changed the mission statement to move from people thinking of the Joint Commission as primarily an accrediting body to an organization that wants to partner with hospitals and inspire them to do better,” says Ann Scott Blouin, PhD, RN, FACHE, executive vice president for customer relations at the Joint Commission.

Surveyors learn how to hold crucial conversations, and they have become more collaborative, working to inspire people. Their wider network of hospitals comes in handy, too. “We will offer suggestions for other ways to do things based on our experiences with other hospitals,” Blouin says.

Value added from the Joint Commission

“The Joint Commission has a broader perspective on patient safety and quality than DNV GL,” says Blouin. That includes National Patient Safety Goals and standards related to labeling specimens and prevention of wrong-site surgery. “These are things that are important to OR managers,” she says, adding that Joint Commission standards are “more clinically rich” than those used by DNV GL.

“ISO 9001 standards are used in a manufacturing environment, so they don’t do well in a clinical environment,” Blouin says. “Joint Commission standards are much more relevant.”

Rosing says one of the Commission’s selling points as to why it should be the accrediting body for hospitals is its value-added offerings such as the Leading Practice Library, Targeted Solution Tool, Core Measures Solution Exchange (a database of core measure improvement success stories from hospitals), and BoosterPaks. “If you aren’t with the Joint Commission, you don’t get free access to the tools,” he says.

The Commission also offers more options for certification in disease management, such as stroke-ready care and advanced perinatal care. DNV GL is playing catch-up by rolling out certification options such as primary stroke center, soon to be followed by certifications in hip and knee surgery and heart failure.

Another advantage of the Commission is that because its history is longer than that of DNV GL, researchers have been able to study the effects of its accreditation.

For example, The Lewin Group found that compared to non-Joint Commission-accredited hospitals, Joint Commission-accredited hospitals had significantly higher operating margins, occupancy, and net income. Another study found the patients evaluated at Joint Commission-certified primary stroke centers were more likely to receive recombinant tissue plasminogen activator as treatment for ischemic stroke, leading to reduced morbidity and mortality.

Some have questioned the independence of its not-for-profit, consulting arm Joint Commission Resources (JCR). However, Blouin says, “We have a series of strict firewalls and confidentiality requirements and a separate officer who administers this. This has been examined in a federal audit, and we passed as 100% compliant.” The Joint Commission and JCR are housed in separate buildings and have separate staff and processes. DNV GL does not offer consulting services.

Cost and time considerations

Setting aside the free value-added tools, the costs for the two accrediting bodies are about the same. However, Crawford says, a benefit of DNV GL is the time savings from not having to ramp up every 3 years and from achieving consistency.

“When you become more consistent, you have time for more continual improvement efforts, and that’s where you’re going to improve customer service,” she says. “Instead of chasing standards, we can focus on processes that aren’t focused on by the Joint Commission. We audit the entire system.”

Another time savings has been that DNV GL has fewer changes in requirements than the Commission, according to Crawford.

“I needed to follow that [Joint Commission changes] and have a
whole team involved in reviewing what the Joint Commission changed," she says. “Now we can make our own decisions as to where we spend our time as opposed to having the Commission make the decision for us.”

Willeumier says that with DNV GL, she can now spend time on quality management system audits. Trained auditors conduct audits in departments other than their own, and the data are aggregated and shared to improve processes.

Making the choice
Switching to another accrediting body requires thoughtful analysis that involves key stakeholders. At Lee Memorial, Crawford facilitated a group of leaders who compared the Joint Commission and DNV GL. “We included the leaders who were the primary contacts for survey visits,” she says.

After researching the accrediting bodies and preparing a SWOT analysis (strengths, weaknesses, opportunities, and threats), the group voted to recommend DNV GL. Lee Memorial’s board then approved the recommendation. At St Joseph Hospital, Gosselin says, in addition to due diligence, the decision team also cleared the change with the legal department. “DNV GL is very similar to Lean, and our hospital has been on a Lean journey,” she adds.

“We don’t want to have accreditation for accreditation’s sake, but instead use it to continually improve,” says Willeumier, adding that DNV GL fits with that goal.

Ho-Nguyen conducted an extensive review of DNV GL and the Joint Commission and found that “DNV GL is simpler, with fewer standards. The ISO structure transforms practice by taking you back to the basics.”

Decision makers should also be aware that initially staff will need to learn about the terminology used by DNV GL, such as ISO 9001. Ho-Nguyen says education consisted of face-to-face sessions offered over a period of 3 weeks. She adds that time is needed for changing the culture, with C-suite support essential for making the change.

Satisfaction with surveys
Reactions to DNV GL from staff have been positive. “Staff like the surveys better now,” Crawford says.

Willeumier has also found staff to be receptive, saying, “Staff have been very pleased with the move to DNV GL. They understand the benefit of ISO 9001, and the surveyors have been well received.” Having annual reviews also makes staff more accountable, she says.

Managers are satisfied, too. “I have much more cooperation from managers with DNV GL,” says Crawford. Heather Long, MSN, MBA, RN, CNOR, clinical director of nursing, surgical services, and endoscopy at St Joseph Hospital, is one of those satisfied managers, who says the survey was very “quality and safety focused.”

She adds, “I think it [DNV GL] will help us refocus on quality, quality measures, and process improvement and hold us all accountable.”

In choosing an accrediting body, Ho-Nguyen says, “You need to see what works for you as an organization. Rosing cautions that, “Frustrations are going to arise no matter which accrediting body you use.”

Time will tell as to whether DNV GL becomes a major player in the accreditation field, and future research will determine its effectiveness compared to the Joint Commission. For now, an important factor DNV GL brings to the table is competition.

“DNV GL is more collaborative, and that’s probably what the Joint Commission needed to make changes,” White says. “Competition is good.”

Cynthia Saver, MS, RN, is president of CLS Development, Inc., Columbia, Maryland, which provides editorial services to healthcare publications.

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Successful hiring for the OR depends on ensuring nurses have the right education and clinical skills as well as the right attitude: Are they willing and able to be team players?

OR nurse leaders at Saint Luke’s Health System (SLHS), Kansas City, Missouri, have been revamping their intern and fellowship programs to speed orientation and boost retention. Thus far, they have whittled down orientation to 6 months.

Tandi Toone, BSN, RN, CNOR
SLHS includes 11 hospitals with 48 ORs. Previously, orientation at SLHS took 9 to 14 months to complete, according to Tandi Toone, BSN, RN, CNOR, clinical nurse manager of surgical services, at Saint Luke’s Hospital (main campus), the flagship hospital of SLHS. With upwards of 20 open positions, there was a need to hire and get OR nurses up to speed quickly.

Cheryl Fisher, BSN, RN, CNOR, joined SLHS in June 2013 as the system clinical education specialist for surgical services, and began building the intern and fellowship programs. By February 2014, when the fellowship program began, 18 OR nurses had been hired into the program: 10 new graduates and eight experienced nurses from other specialties. Of those, 12 completed the program with an average orientation length of 25 weeks, Fisher told OR Manager.

As part of the hiring process, Fisher recommends having candidates spend 1 or 2 days observing in the OR. That way, staff can gauge their level of interest and engagement, and candidates get a better idea of what the job entails.

“A lot of the bedside nurses and new graduates don’t have a true concept of what OR nursing involves,” Fisher says. “I didn’t want the managers to hire someone who might have a false idea of what the OR is and then lose them after orientation.”

Toone, who manages the ORs on the main campus, doesn’t require observation as part of her hiring process because many interns get that exposure in nursing school. However, she notes, “Sometimes, no matter what you do, you may hire someone who just isn’t the right fit.” For example, a floor nurse coming to work in the OR must be willing to give up autonomy and get used to working as part of a team.

Intern program
The intern program was designed to enable SLHS to hire bachelor of science in nursing (BSN) students as scrub technologists and have them complete a 12-week orientation by working full time during the summer before their senior year.

After completing orientation, interns must work independently as a scrub technologist for at least 8 hours per month PRN in their senior year, Fisher explains. To balance their case load with their school work, she says, they must work a minimum number of hours during the school year—about one shift per month—for a total of 72 hours (sidebar at right). Interns are encouraged to work extra during school breaks and free time off to maintain their competency. The goal of this program is to decrease RN circulator orientation from 6 months to less than 4.

Structured OR educational programs shorten orientation period

**Internship Training**

**Day 1—8 hours Didactic**
*What is Perioperative Nursing, Surgical Attire, Environment of Care, Traffic Patterns, Sterile Technique*

**Day 2—8 hours Didactic**
• Decontamination/Sterilization, Suture, Instrumentation (minor tray), Cautery Safety, Counts, Code Blue in the OR, Latex Allergy

**Day 3—8 hours Didactic**
• Surgical Hand Scrub, Gowning, Gloving, Universal Protocol, Radiation Safety, Laser Safety, Fire Safety, Workplace Safety

**Day 4—8 hours Skills Lab in an OR suite**
• Surgical Scrub, Gowning and Gloving, OR Bed Mechanics, Back Table and Mayo Stand Setup, Procedure Draping, Loading/Unloading Blades and Suture, Passing Instruments


“We used two models: Benner’s model to help nurses gain the competency needed for the OR and Donna Wright’s model,” Fisher says (sidebar, p 19). “Donna Wright very firmly believes that competency should be meaningful, and we should get away from skills fairs.”

Instead, Fisher designed competencies based on meaningful use. For example, for skin prepping, students must meet behav-
Adopting the Donna Wright model at Saint Luke’s Health System

The Donna Wright model for competencies is a dynamic process: the collection of skills, abilities, and behaviors that address the changing nature of the job for a given period of time. Annual competencies should be a valid and reliable indicator of the nurse’s skills set and ability to accomplish such tasks. These indicators then translate into the nurse’s ability to give quality and safe care.

Historically, within Saint Luke’s Health System (SLHS), annual competencies consisted of checklists and a skills fair. Staff attended the fair and learned the skills, but they didn’t challenge themselves to remain truly competent in all skills. Therefore, “just in time” education and additional resources were still being used to handle tasks that were unfamiliar or not often performed.

By adopting Wright’s model of annual competencies, SLHS now has nursing staff assist with development of annual competencies and learning methods. The model has increased the level of meaning for annual competencies, and staff play an integral role. No longer are they completing tasks by checking them off at a skills fair. Instead, they are creating a significant process that allows them to be competent in a skill set.

Verification methods including tests, return demonstration, evidence of daily work, case studies, exemplars, peer review, self-assessment, discussions/reflection groups, presentations, mock events, and quality improvement monitors are used to assess and measure specific skills.

Staff must complete all competencies within 6 months. Failing to do so will negatively affect their annual performance review, and an action plan must be created for all staff members deemed not yet competent.


Cheryl Fisher, BSN, RN, CNOR

Adopting the Donna Wright model at Saint Luke’s Health System

ioral criteria (sidebar, p 20). Out of a total of 37 competencies Fisher compiled for the OR, she says, 12 focus on teamwork based on Joint Commission criteria, and others are based on regulations.

As a stellar example of teamwork, Toone cites the partnership between an intern and an ear, nose, and throat (ENT) nurse who was an excellent scrub technologist. “I wanted to show Steven [the intern] that you really can do whatever comes through your door,” Toone says. “Even though Jess [the scrub technologist] is on the ENT team, she can do it all. Once you know your basics, you can start to grow. Our surgical technologists were very happy to have Steven because he helped reduce their call load.”

In addition, Toone explains, Saint Luke’s College of Health Sciences offers a 2-week perioperative elective in the summer. Her intern took that class, which gave him a good head start for coming into the OR.

A total of three interns went through the program in 2014. The fellowship program was underway when the intern program began, so fewer new candidates were needed.

All three interns were offered RN circulator positions. Of those, only one decided to stay in the OR, one moved to the neurosurgical ICU within SLHS, and the other went to a hospital outside of the system to work in labor & delivery.

“We’re currently in limbo in terms of how much we want to gear up the intern program,” Fisher says. One problem with hiring junior nursing students, she says, is that they haven’t yet completed their clinicals. They’re being asked to decide if they want to work in the OR before they’ve been exposed to other specialties.

To increase retention from interns, she is recommending posting the open RN circulator positions in January instead of April. “We decided we wouldn’t require the interns to accept a position after graduation because there was too high a risk that they would stay for the required 6 months and then leave. This summer, we hope to expand the intern program to include critical care, emergency room, labor & delivery, and neonatal ICU—specialty areas that have a more difficult time retaining new nurses—to see if we can decrease their orientation time as well,” Fisher says.

Precepting

Although preceptor education is encouraged, it’s not required. “Saint Luke’s offers a preceptor

Continued on page 20
boot camp, and the Missouri Hospital Association offers a preceptor academy,” Toone says. “We try to get people to attend some kind of workshop or class.”

Preceptor boot camp is a 5-hour class during which nurses work through topics of their choice. Examples include conflict resolution, accountability, and any issues that have arisen with the orientee they’re precepting. “They do a lot of role-playing and hands-on activities,” Fisher says.

The smaller hospitals within SLHS have two to six ORs, and students at those facilities are exposed to a wide mix of cases, Fisher says, whereas on the main campus, there are 16 specialty rooms in the main OR, four in the neuro tower, and five in the cardiovascular OR. “At the main campus, rooms are split up by teams. For example, a student may be working all day in orthopedics or gynecology, versus a mix of cases at one of the smaller hospitals,” she explains. Likewise, students tend to work with just one preceptor in the smaller hospitals, but students at the main campus have different preceptors for each of the specialty teams.

“Essentially we are a team-based model, and everyone is required to take call. Saint Luke’s Hospital is a Level 1 trauma center,” Toone explains. Once nurses have completed orientation and are placed on a specialty team, they are scheduled mostly for procedures in their specialty; however, they’re also expected to be able to flex to other specialties.

To provide adequate orientation, Toone says, she has a primary and a secondary preceptor for each specialty. That way, there’s coverage if the primary preceptor is unavailable on a given day.

“The preceptor boot camp is currently an elective class, but we’re considering whether to require formal training before nurses can precept new hires,” Fisher notes.

Fellowship program
The fellowship begins when a nurse is hired and ends with completion of a 6-month orientation. The program includes class-

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**Unit-Based Competency Preoperative Skin Asepsis**

**Preceptor Initials:** ____/_____/____ Date Completed:

**Objective:** Assesses, implements, and documents the recommended practices for achieving skin asepsis prior to a surgical procedure.

**Behavioral Criteria:**

- Performs preoperative assessment to determine plan of care affecting skin preparation (allergies, contraindications, surgical site, skin conditions/integrity, etc)
- Discusses and demonstrates proper hair clipping at the surgical site(s)
- Provides patient privacy while allowing adequate exposure of operative area
- Verbalizes an understanding of the need for the surgical site to be free of soil, debris, exudates, and transient microorganisms to minimize contamination of the surgical wound before antiseptic preparation application
- Discusses what protective measures should be implemented to prevent skin and tissue injury caused by prolonged contact with skin prep agents (preventing pooling, contact with electrode and dispersive pad, etc)
- Verbalizes an understanding of the flammability characteristics of all prep agents
- Discusses what precautions should be taken to minimize the risk for surgical fire and patient burn injury
- Demonstrates proper antiseptic prep and removal using the manufacturer’s written instructions – Duraprep – Chloraprep – Scrub/Paint (Betadine, Chlorhexidine/Hibiclens, etc)

**Evidence of Achievement:**

- Assesses patient preoperatively for antiseptic skin prep
- Performs skin preparation and hair removal independently, documents, and removes skin preparation (if indicated).


**Source:** Cheryl Fisher, BSN, RN, CNOR, and Tandi Toone, BSN, RN, CNOR, Saint Luke’s Health System, Kansas City, Missouri. Used with permission.
room instruction and mentoring by a preceptor. Students receive human resources and patient care services orientation along with EPIC software training. The didactic component consists of 6 days focusing on specific skill sets (sidebar).

Fellowship programs take place in summer and winter, Toone says. During orientation, nurses first scrub for a couple of weeks, and then they circulate through all the different specialties before being placed into the specialty of their choice.

For the fellowship program that started in February 2014, 18 OR nurses were hired: 10 new graduates and eight experienced nurses from other specialties—five of whom had less than 2 years’ experience, while the other three had more than 5 years of experience.

A total of 12 nurses completed the fellowship program with an average orientation length of 25 weeks. New graduates completed the program slightly faster than the more experienced nurses: an average of 24.5 weeks vs 25.5 weeks, respectively.

Nurse residency program
The nurse residency program, which started in 2012, has six modules that all new nurse graduates must complete: teamwork and collaboration; legal, ethics, and informatics; care coordination and safety; evidence-based practice; quality; and professionalism.

“The whole cohort is together in one room for an hour-long lecture, and then we split up into specialties,” Fisher explains. “We talk about how the different modules affect their specific unit.” Some of the content in the modules isn’t OR-specific, so Fisher provides exercises that apply to those environments.

New nurse graduates often struggle with the transition from being a nursing student to being an RN, according to Fisher. She uses evidence-based practice projects to orient students to both teamwork and professionalism. For example, she says, young nurses need to learn how to collaborate with older team members or to help establish protocols.

Going forward
For the 2015-2016 programs, Fisher says, most of the nurse managers who didn’t participate in hiring anyone in 2014 are interested in hiring this year. In addition, according to Toone, managers are more open to hiring interns than they used to be.

“For the 6-month orientation, the fellowship program costs about $22,000, compared with about $15,000 for the intern program,” Fisher notes. “One of our goals is to decrease the number of fellowship nurses and increase the number of interns. We also would like to increase the participation of our critical access hospitals, and we would like to expand our float pool.”

Careful selection of interns is one key to future success. “They have to be interested in the technical side of nursing, and they have to understand there isn’t the level of patient interaction you have on the floor,” Fisher says.

—Elizabeth Wood

Reference
Toone T, Fisher C. Optimize OR orientation with OR nursing intern and OR fellowship. OR Business Management Conference 2015.

Fellowship Training

Day 1—8 hours Didactic
* What is Perioperative Nursing, Surgical Attire, Environment of Care, Traffic Patterns, Sterile Technique

Day 2—8 hours Didactic
* Decontamination/Sterilization, Suture, Prepping (discussion and lab), Instrumentation (minor tray)

Day 3—8 hours Didactic
* Patient Positioning, Surgical Hand Scrub, Gowning, Gloving, Cautery Safety, Counts

Day 4—8 hours Skills Lab in an OR suite
* Patient Positioning, Surgical Scrub, Gowning and Gloving, OR Bed Mechanics, Tourniquets, Back Table and Mayo Stand Setup

Day 5—4 hours Skills Lab in an OR suite (Morning) and 4 hours Didactic (Afternoon)
* AM: Gowning and Gloving, Procedure Draping, Loading/Unloading Blades and Suture, Passing Instruments
* PM: Unintended Hypothermia, Wound Classification, DNR in the OR, Code Blue in the OR, Latex Allergy

Day 6—8 hours Didactic

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Avoiding preventable harm in the OR is the goal of any surgical services department, and meeting that goal requires excellent communication and collaboration among staff members. At Cedars-Sinai Medical Center in Los Angeles, the Safe Care in the OR Everytime (SCORE) project has raised awareness about safety and engaged front-line staff in process improvements.

“We use teams to proactively identify and address safety issues and concerns before a problem occurs,” says Joan Dawson, MSN, RN-BC, CNOR, NEA-BC, service line manager for OR, anesthesia, and surgery center services at Cedars-Sinai.

In all, 20 projects have been completed since the project began in 2013, and 18 are in progress. The staff’s perception of a culture of safety, as measured by an employee survey, has increased by more than 6%, and these scores are higher than the organization-wide results.

“It’s a grassroots effort,” says Ann Gilligan-Maruca, MSN, RN-BC, assistant nurse manager for OR, anesthesia, and surgery center services. “The staff usually identifies an issue that needs to be addressed.”

Dawson and Gilligan-Maruca say organizational support, a team-based approach, ongoing reporting, and celebrating successes all contribute to the program’s effectiveness.

Support at the top
For a program like SCORE, “It’s important to have senior vice presidents involved so they support the program and so that you have a budget with which to make the necessary changes,” Gilligan-Maruca says.

In 2012, a group of leaders from anesthesiology, surgery, operations, and administration visited Johns Hopkins Hospital in Baltimore with the goal of increasing involvement of department leaders as a strategy for improving patient safety.

The team discussed the Comprehensive Unit-based Safety Program (CUSP) being used by Johns Hopkins and obtained tools and resources. This participation from leadership evolved into SCORE, a project designed to promote the team approach to safety in the OR.

After successfully initiating a pilot on one OR floor, Cedars-Sinai, which has a surgical volume of 30,000 cases, now has 12 SCORE teams working among the six OR floors and procedural areas. The concept also has expanded to the cardiac catheterization lab, interventional radiology, and the post-anesthesia care unit (PACU).

Support from administration has been ongoing. “We have senior leadership from surgery and human resources who sit in on some of the meetings where we discuss SCORE,” Dawson says. “It’s nice for staff to see that support.”

Dawson says a SCORE team might include a surgeon, anesthesiologist, OR nurses, or PACU nurses, depending on the identified potential safety issue.

Effective teams
“No one person can solve a problem on a unit,” Dawson says. “You need teamwork and involvement from all levels.”

The team members, not the leaders, drive projects. “The managers know what is happening, but we don’t push ideas and solutions on the staff,” Dawson says. Although the immediate team is primarily responsible for the project, involvement extends farther. “The whole floor participates,” Gilligan-Maruca says. That might be in the form of interventions discussed during daily huddles or discussions at staff meetings.

In some cases, a project can prompt change beyond the OR. In one SCORE project, “Pause, Clear, Go,” a pause was initiated to move patients more safely from the OR bed to a cart. The anesthesiologist says “pause,” then names the airway, lines, and drains (stating “clear” after each) to ensure they are in clear view and won’t get pulled out accidentally. Once these are cleared, the anesthesiologist says “go,” and the patient is safely moved.

This “safety pause” was trialed on one OR floor, implemented throughout the other OR floors (the typical pattern for SCORE projects), and is now being used throughout the hospital.

Finding time to work on projects can be a challenge, but staff are encouraged to remind supervisors that they need time to do so. “Staff are also working in rooms with members of their team or seeing them in the hallways, so some of the work gets done that way, too,” Gilligan-Maruca says.
Monthly meetings also provide a means of identifying the need for more time or other staff needs for the project. The SCORE team, chief of anesthesiology, OR director, performance improvement representative, the vice president assigned to the floor, Dawson, and Gilligan-Maruca, all attend these meetings, which last 15 to 30 minutes and are held on different days and times for each floor.

Initially, Gilligan-Maruca was responsible for the operational side of SCORE, but now a performance improvement staff member dedicated to the OR coordinates the program.

Sharing results and celebrating success

The SCORE teams share the results of their projects at quarterly meetings, a joint meeting of the same people who attend the monthly meetings, along with the vice president for perioperative services.

“They [team members] do an oral report before the entire group,” Dawson says.

The report includes the safety concern, pre- and post-implementation data, the process, and interventions (sidebar). “They show what they started with, what they did, and their results,” Dawson explains. “It’s pretty exciting for them.”

Some staff are intimidated about speaking in public. However, Gilligan-Maruca says that having a PowerPoint template helps to ease anxiety, and making the presentation “helps some people come out of their shells.”

The chief of anesthesiology and chief of surgery round on the OR floors, which also helps put staff at ease. “They [the staff] are getting their voices heard,” Gilligan-Maruca says.

Staff who are part of SCORE initiatives often enjoy success when it comes to performance review time. “We are strong believers in staff participating in process improvement,” Dawson says.

Project successes are also reinforced at quarterly meetings. “Success breeds success,” Gilligan-Maruca says.

Cynthia Saver, MS, RN, is president of CLS Development, Inc., Columbia, Maryland, which provides editorial services to healthcare publications.

Joan Dawson and Ann Gilligan-Maruca will be presenters at the OR Manager Conference, October 7-9, in Nashville. Visit www.ormanagerconference.com.

Patient safety

Sharing successes

SCORE teams share their success stories by making a presentation, complete with PowerPoint, to other staff and the leadership team. Teams follow a general template to make it easier for them to craft their information. Here are examples of past presentations.

**OR floor eight**

**Problem:** Incidents of chin ulcers in patients positioned prone during posterior spine surgery

**Goal:** Reduce or eliminate chin ulcers

**Interventions:**
- Project “Chin Up” included the following actions:
  - Use different kind of foam to protect skin
  - Create an audit tool so staff evaluate skin preoperatively, intraoperatively, and postoperatively (in the OR and PACU)
  - Apply Mepilex dressing to the chin and other high-risk areas
  - Anesthesia and staff collaborate to lift the head to relieve pressure every hour during surgery.

**Result:** Ulcers decreased from eight to one immediately after changes implemented and none since.

**Night shift (one OR floor is open 24/7)**

**Problem:** Difficult to open bottles in the OR

**Goal:** Find easier ways to open hard-to-open bottles

**Interventions:**
- Found bottle openers that we could use in the OR to open triple antibiotic solutions and other hard-to-open bottles
- Worked with pharmacy to see what could be done on their part to decrease the difficulty with opening: the department changed the way it was tightening the lids

Other projects have included perioperative deep venous thrombus prevention, difficult airway management, and needlestick prevention.

“Safety concept expanded to other units.”
A n emergency situation in the OR can rattle even the most experienced surgeons, anesthesiologists, and staff. To help reduce anxiety and prompt a more effective response to emergencies, clinicians increasingly are turning to cognitive aids. These cognitive aids, routinely used for years in aviation and other high-hazard industries, are an integral part of crisis resource management, as developed and taught for decades by David Gaba, MD, Steven Howard, MD, and their colleagues.

Sara Goldhaber-Fiebert, MD

“When cognitive aids help clinicians retrieve rarely used information, which is challenging at best under stress,” says Sara Goldhaber-Fiebert, MD, who has led Stanford’s clinical implementation of emergency manuals for all perioperative and procedural anesthetizing locations since 2012.

Goldhaber-Fiebert is also one of the founding members of the Stanford Anesthesia Cognitive Aid Group as well as the global Emergency Manuals Implementation Collaborative (EMIC), along with Dr Gaba and Dr Howard, and clinical assistant professor in the department of anesthesiology, perioperative and pain medicine at Stanford University School of Medicine in California.

“They enable clinicians to focus on assessing the crisis, organizing the team, and communicating effectively, all of which benefit our patients,” she says.

According to a review article by Stuart Marshall in Anesthesia & Analgesia, several studies using simulation found that technical performance improved with use of cognitive aids. However, positive results aren’t universal, pointing to the need to base aids on clinical guidelines when possible, consider the design of the aid, and test usability through simulation before implementation.

A common cognitive aid is the crisis checklist. Checklists are typically part of an emergency manual, which may also include other cognitive aids. Although potentially valuable, checklists can be challenging to implement. Leaders need to understand the rationale, create an effective team, and provide education.

Why checklists?
Checklists mean people don’t have to rely only on memory in a crisis situation. “We have good information that shows when people rely on memory, they miss crucial steps,” says Laura Ardizzone, DNP, CRNA, DCC, director of nurse anesthesia services at Memorial Sloan Kettering Cancer Center (MSKCC) in New York City, which has been using checklists in the OR for about 1.5 years. “Checklists keep people on task.”

Checklists contain detailed information organized in an easy-to-use format. “The culture is changing to increasingly recognize that it matters what management actions reach our patients, not what information we hold in our heads,” Dr Goldhaber-Fiebert says. For instance, nurses and anesthesiologists might need to know how to mix dantrolene for management of malignant hyperthermia (MH) only once in their careers. Having those detailed instructions readily available, and knowing how to use them rather than relying on memory alone, makes sense. Checklists also prompt the team to remember simple things, such as turning off the volatile anesthetic, which can continue to trigger the MH reaction.

“They [checklists] provide the team the right information at the right time,” Dr Goldhaber-Fiebert adds.

Developing checklists
David Borshoff, MBBS, FANZCA, director of anesthesia and pain medicine at St John of God Hospital in Perth, Western Australia, and author of The Anesthetic Crisis Manual, North American Edition, says he included many OR caregivers in developing checklists. Team members were consulted to review guidelines for the treatment of different emergency conditions and discuss how they would act.

“By eliminating as many non-essential components as possible, a clear, concise checklist of prioritized, essential steps is created,” he notes.

Several websites have posted checklists and emergency manuals based on evidence (sidebar, p 27). Modifications are based on review of the literature and feedback from those who use them.

To help evaluate checklists, organizations might want to consider the properties of an ideal cognitive aid defined by Stuart Marshall:
Patient safety

- Its content must be derived from best practice guidelines or protocols.
- Its design should be appropriate for use in an emergency situation.
- It should be familiar—in a format used in practice and training.
- It should also help other team members to perform their tasks in a coordinated manner.

When it comes to implementing checklists in an OR, “people shouldn’t feel the need to recreate the wheel; that wastes time,” Ardizzone says. “Instead, adapt what’s already available.”

MSKCC adapted checklists from Stanford and Brigham and Women’s Hospital. For example, Ardizzone says, they added how to convert a robotic procedure to an open one in an emergency situation. Even small adaptations, such as using the term epinephrine or adrenaline depending on local preference, help make checklists more meaningful.

However, Ardizzone adds that the project team needs to remember that checklists are evidence based. “In the beginning, a lot of people wanted to tinker with them and adapt them to their own room,” she recalls. “You want to balance between local adaptation and consistency,” Dr Goldhaber-Fiebert says.

In addition to Ardizzone, the team that developed the checklists at MSKCC included nurses, surgical technologists, surgeons, anesthesiologists, the director of the department of quality and safety, and a representative from information technology.

“What’s most important is that everyone needs to be on board,” she says. “It needs to be a group effort.”

Applying in practice
Now that the checklists have been implemented, ongoing work related to reviewing and revising them is the responsibility of an OR multidisciplinary safety group that meets monthly. The group, cochaired by a surgeon and an OR nurse manager, includes surgical technologists, OR nurses, anesthesiologists, and certified registered nurse anesthetists.

At MSKCC, checklists are stored in the online health information system. “We have large LCD screens so the checklists can be displayed on all the monitors,” Ardizzone says. “Some areas of the country are just printing off the checklists and keeping them in the room; that works, too.”

Dr Borshoff supports what he calls a three-level implementation: a hard copy on the anesthesia cart, an electronic version on monitors in the room, and an app for the smartphone.

Continued on page 28

Resources for crisis checklists
Fortunately, many resources exist for crisis checklists. Sites have free tools available for download.

- Emergency Manuals Implementation Collaborative (http://www.emergencymanuals.org). The collaborative’s goal is to facilitate use of emergency manuals in clinical practice and provide a framework for education. The site includes tools, resources, and implementation stories from those participating in the collaborative.
- Stanford Emergency Manual (http://emergencymanual.stanford.edu). This Stanford-based site includes cognitive aides for 25 critical events, Crisis Resource Management key points, mobile downloads, reasons for implementing an emergency manual, implementation tips, and video resources, including one that discusses the evidence supporting the use of these tools.
- Project Check (http://www.projectcheck.org/crisis.html). This site includes crisis checklists developed by a team at Ariadne Labs for 12 of the most common operating room crises. The checklists were found to reduce failure to adhere to critical steps in management by nearly 75%, according to a study in The New England Journal of Medicine. This site also includes an implementation guide and video resources.
- Society for Pediatric Anesthesia (http://www.pedsanesthesia.org/newnews/Critical_Event_Checklists.pdf?201310291500). This PDF includes checklists for 18 pediatric crisis events.
- Stanford AIM Lab (http://aim.stanford.edu/project/cogaids/). This site includes pictographic cognitive aids for various crises, designed by faculty in the Stanford Anesthesia Informatics and Media Lab.

Other resources:
Continued from page 27

“It’s important to remember, and this is supported by some groups with simulation testing, that despite the technology revolution, hard copy is still the simplest, most readily available, and most user-friendly option for OR staff,” Dr Borshoff says.

Experts vary as to whether there should be a “reader” who calls out items in the checklist. “I think most of us agree that a reader is useful, but personally, I don’t like to lose any flow by making it a formal process,” Dr Borshoff says. “I just ask an OR staff member to get the manual and check with me that we have not missed any crucial steps.” How to use the checklists in practice depends on the country, culture of the OR, and culture of the organization, he notes.

Effective use of checklists depends on excellent teamwork; that’s where interdisciplinary education comes into play. “If people don’t know about them, they can’t use them,” Dr Goldhaber-Fiebert says. “Everyone has a role to play, for example, any team member can ask the event leader, ‘Do you want me to get the emergency manual?’”

Providing education
Dr Goldhaber-Fiebert says training increases the probability that clinicians will use checklists and emergency manuals more effectively. Simulation exercises are used at Stanford and elsewhere so team members can practice applying the emergency manuals and improving teamwork and communication.

“Education not only promotes familiarity and recognition of cognitive aids, it also creates an awareness of the importance of good crisis management and helps prepare the practitioner for the unexpected,” Dr Borshoff says.

At MSKCC, Ardizzone says, team members taught staff by service line. “We did 10 to 15 minutes of simulation in an OR and showed a video illustrating how to use the checklists.”

Nurses are an important part of the education, along with other key participants during a crisis. Dr Borshoff highlights the benefits of crew resource management, which focuses on a team approach.

“The important thing is, everyone involved has to be aware, receptive, and flexible,” Dr Borshoff says, referring to the response to an emergency situation. “It also helps if egos are left at the door.”

Meeting challenges
Dr Borshoff says that another useful tool to supplement checklists is the mantra: Call, communicate, and delegate. This mantra was derived from the aviation mantra: Aviate, navigate, communicate.

“In other words, keep the plane flying and away from danger before attending to troubleshooting,” he says. Similarly, the primary caregiver should stay focused on the patient’s immediate needs while obtaining extra help and delegating tasks so situational awareness is not lost.

The mantra also encourages getting help early. “Simulation has often demonstrated people can become fixated with solving the problem at hand [fixation error], and forget to share the burden until late into the developing crisis—sometimes too late,” Dr Borshoff says.

Avoiding complacency
“I can’t say it’s been easy,” Ardizzone says about implementing the checklists. “We’ve had bumps and bruises.” Many staff and physicians are unfamiliar with cognitive aids and thus have to learn about their use and advantages.

Success stories can help facilitate checklist adoption. “Find those who have successfully used them,” she says. “They will be the best champions for their group.”

Another challenge is the plethora of checklists in the OR. “People are tuning out when you say ‘checklists,’” Ardizzone says, adding that not every problem is solved by creating a checklist.

Dr Borshoff agrees champions are important. “The more case presentations, lectures, discussions, or similar educational sessions, the better,” he says.

Pitfalls of checklists
Like any other tool, checklists aren’t a panacea, and they have their pitfalls. Dr Borshoff outlines three potential problems:

• A poorly designed checklist will limit its usefulness. “Simplicity, precision, and good prioritization of tasks are important,” he says. “Overwhelming users with information will turn people away, and a lack of thought about color and design results in failure to connect with the user.”

• Use of checklists may be limited because some clinicians feel they undermine their experience and clinical acumen, he notes. “There is no substitute for experienced practitioners, for example, Captain Chesley Sullenberger’s Hudson River landing, but the message we need to get out is that these are simply cognitive aids designed to support the caregiver during..."
stressful crisis scenarios.”

• If the wrong checklist is used, unintentional errors can occur. Dr Borshoff notes that, in addition to checklists, situational awareness is required. There should be intermittent pauses in the process for patient review in case the diagnosis needs to be reassessed.

“Emergency manuals should never replace good teamwork or good judgment, nor should they be used before starting necessary clinical actions such as chest compressions,” Dr Goldhaber-Fiebert adds.

A tipping point

“Emergency manuals have really taken off in the past 3 to 4 years,” Dr Goldhaber-Fiebert says. As a matter of fact, she says, many institutions are encouraging their use as a patient safety initiative. “We are reaching a tipping point.”

Dr Borshoff recognizes there is another implication of checklists and emergency manuals: “Not only do I think the benefits of cognitive aids for patient safety will become more apparent with time, there may eventually be legal implications of not having a checklist manual in each operating room.”

Cynthia Saver, MS, RN, is president of CLS Development, Inc., Columbia, Maryland, which provides editorial services to healthcare publications.

References


Screening heavier patients for ambulatory surgery just became a little easier, thanks to a new brochure from the Accreditation Association for Ambulatory Health Care (AAAHC) Institute for Quality Improvement, Skokie, Illinois.

Titled “Ambulatory surgery and obesity in adults: Preventing complications,” the two-page toolkit draws on some 40 research articles outlining risks and techniques associated with surgery on obese patients. It covers evaluation methods and surgical considerations, and includes a flow chart for quick reference.

The growing number of obese Americans and increasing use of outpatient surgery prompted the AAAHC Institute to consolidate research findings for easy reference, according to senior director and general manager Naomi Kuznets, PhD. “Knowing the risks and how to handle obese patients is important for ambulatory surgery centers [ASCs] and office-based practices,” she says.

The toolkit can be downloaded at www.aaahc.org/en/institute/resources. Another toolkit, “Ambulatory surgery and obstructive sleep apnea,” is also available on the site.

Careful selection needed
The National Institutes of Health (NIH) uses the body mass index (BMI), a formula based on the ratio of height to weight, to define weight classes. BMI may not be the most accurate determinant of obesity because it does not reflect muscle mass and other components. Some experts favor techniques such as hydrostatic weighing, which measures total body water, minerals, fat, and protein.

The NIH considers a person with a BMI of 25 to 29.9 as overweight, and a BMI of 30 or higher as obese. Obesity is further divided into three BMI classes:

- Class I: 30 to 34.9
- Class II: 35 to 39.9
- Class III: 40 and above.

The Centers for Disease Control and Prevention estimates that 69% of US adults are overweight, and 36% are obese. Even as more people become heavier, more complex procedures are moving from hospitals to outpatient settings.

The only way to manage that trend is to pay even closer attention to patient selection. As anesthesiologist David Shapiro, MD, manager of the Ambulatory Surgery Company in Tallahassee, Florida, notes, “Most ASC tragedies occur not from error, but from faulty patient selection.”

With obese patients, associated conditions such as obstructive sleep apnea increase the risk of undergoing anesthesia.

The American Society of Anesthesiologists publishes a six-level scale of patient status ranging from normal and healthy to brain dead. Weight is only one of the factors used to locate a patient on the scale.

The Agency for Healthcare Research and Quality (AHRQ), part of the US Department of Health and Human Services, advises against accepting a patient with a BMI higher than 34.9 for outpatient surgery (see patient selection guidelines at www.ahrq.gov).

Meena Desai, MD, managing partner of Nova Anesthesia Professionals in Villanova, Pennsylvania, notes that the problem is not so much a patient’s weight, but the comorbidities that accompany it. In addition to obstructive sleep apnea, they may include:

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• systemic hypertension
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• asthma
• stroke
• renal dysfunction
• diabetes
• deep vein thrombosis.

Even successful surgery may have aftereffects. “The risk of respiratory complications may last for several days after surgery,” Dr Desai says.

**Higher infection rates**

During a procedure, high BMI creates other difficulties. According to research by William Mihalko, MD, PhD, chair of the department of orthopedics at the University of Tennessee, Knoxville, high BMI can raise blood glucose levels, increasing the risk of surgical site infections. The presence of diabetes also may delay wound healing, he notes.

Heart disease may be aggravated by the stress of surgery. Dr Mihalko and his colleagues found obese patients had higher mortality after total hip arthroplasty and higher rates of coronary events following total knee arthroplasty.

In a presentation to the American Academy of Orthopaedic Surgeons, Dr Mihalko noted that even without general anesthesia, obese patients in ASCs tend to have more complications.

“Even when regional anesthesia is used, obese patients with sleep apnea have higher complication rates after orthopedic procedures,” he said.

Researchers at Johns Hopkins University School of Medicine, Baltimore, found obese patients are 12 times more likely to experience complications following elective plastic surgery.

In a study published in the journal Plastic and Reconstructive Surgery, Martin Makary, MD, MPH, reported, “Our data demonstrate that obesity is a major risk factor for complications following certain kinds of elective surgery.”

Dr Makary notes that obese patients present an additional problem for surgeons: Their procedures are more difficult, yet reimbursement from insurers and Medicare remains the same as for less challenging patients.

“Payments are based on the complexity of the procedure and are not adjusted for the complexity of the patient. Policymakers need to make sure they aren’t giving physicians financial incentives to discriminate on the basis of weight,” Dr Makary says.

Other researchers have noted that ASCs seeking to serve obese patients must also invest in new equipment, such as longer needles and sturdier furniture. Staff must be trained to lift and maneuver heavy patients safely, and still there is risk of injury.

**The selection process**

In its review of the scientific literature, the AAAHC Institute concludes that BMI alone should not dictate whether a patient is appropriate for the ASC. This is especially true for patients with BMIs below 50, the toolkit explains. However, “the literature indicated that the ‘super obese’ (BMI >50 kg/m²) appear to be at higher risk of perioperative complications and should be thoroughly evaluated before undergoing surgery in an ambulatory setting.”

The toolkit also reminds ASC managers to be sure staff are trained to communicate with patients about their physical size, showing compassion and sensitivity.

The preprocedure screening is especially important, the toolkit notes, and identification of comorbidities should be a primary consideration.

A review of current medications should include weight loss drugs. Patients with obstructive sleep apnea should avoid opioids, and the toolkit recommends the lightest practical level of sedation.

The flow chart shows the BMI and waist measurements and reviews comorbidities. At each stage, a patient not within guidelines should be referred to a hospital, or the procedure should be delayed until conditions improve.

The toolkit is meant for immediate use—the AAAHC Institute offers a laminated version to post on the wall—but can also be a starting point for discussion.

“This new tool is intended for quick reference when staff have questions. It also can serve as a guide for surgery center clinical committees in developing their own internal guidelines,” Kuznets says.

—Paula DeJohn

**References**


Reducing ‘never events’ and preventable harm
Recent research highlights how findings from adverse events, serious reportable events, sentinel events, and patient safety events can help play a role in reducing patient harm.

Researchers from Johns Hopkins Medicine, Baltimore, discuss the evolution and data collection of never events, and recommend ways to improve event tracking and reporting, including:

• standardized definitions of events
• greater transparency of performance and reporting
• mechanisms to share best practices for reducing events.


Hospita factors linked to mortality after AAA repair
Hospital size was significantly associated with mortality for open repair but not for endovascular repair of abdominal aortic aneurysms in a study. In contrast, hospital type was significantly associated with mortality for endovascular repair but not for open.

Multivariate analysis found that academic hospital type was the single most significant predictor of reduced mortality after AAA repair.


Bariatric surgery Centers of Excellence did not restrict access to care
The Centers for Medicare & Medicaid Services’ 2006 certification requirement that bariatric surgery be performed only in hospitals designated as Centers of Excellence was not a barrier to patients’ access to bariatric surgical care, a study finds.

The certification requirement was controversial because some believed it impeded access to care. CMS removed the requirement in 2013.

The findings do not support the hypothesis that restricting bariatric surgical patients to Centers of Excellence reduced access to care or increased disparities, the authors say. More research is needed to determine whether the 2013 change in policy might sacrifice patient safety without addressing the real cause of limited access to care.


Preop cognitive impairment linked to postop cognitive dysfunction after total hip
Patients with preexisting cognitive impairment have an increased incidence of postoperative cognitive dysfunction and cognitive decline after hip replacement, finds a study. The study included 300 total hip patients and 51 nonsurgical controls.

Preoperative cognitive impairment, identified in 32% of patients, was a good predictor of cognitive dysfunction at 3 months and 1 year and cognitive decline at 1 year after surgery.

Identifying early decline in cognitive function is now routine in geriatric care and an accepted way to identify future cognitive decline.

The researchers say their findings suggest that preoperative cognitive impairment may similarly predict cognitive decline following surgical intervention.