

## Performance improvement

# OR traffic data demonstrate need to reduce door openings

**A**lthough limiting OR traffic can help reduce surgical site infections (SSIs), doing so can be a challenge in a busy OR. Two hospitals recently completed projects that successfully reduced traffic.

At the University of Iowa Hospitals and Clinics (UIHC) in Iowa City, a guideline for limiting door openings significantly reduced the number of door openings per hour during total abdominal hysterectomy (TAH) cases from 18 to 10. And at Gillette Children's Specialty Healthcare in St Paul, Minnesota, a protocol for decreasing door openings significantly reduced OR traffic; during an average 4.5-hour case, this difference translated into 22 fewer door openings.

### Seeking quality

SSIs account for about 20% of healthcare-associated infections reported to the National Healthcare Safety Network, a healthcare-associated infection tracking system that is part of the Centers for Disease Control and Prevention. These infections can result in significant loss of revenue for a hospital, making them a target for patient safety committees.

Jennifer Esser, MSN, MS, RN, CNOR, the education specialist for surgery at Gillette, says the SSI committee was considering various ways to reduce infections and assigned the traffic project to the OR department. The timing was perfect. Keonemana Shrinski, BSN, RN, CNOR, a level 2 nurse at Gillette who is chair of the intraoperative patient safety committee, says moving into new space in 2011 led to an increase in OR traffic.

Gillette has seven ORs to handle its annual volume of about 3,500 to 4,000 cases. Esser and Shrinski collaborated on the project, which included 6 months of data collection both before and after the intervention. Door openings were tracked through an automatic device on the door that was being used for another research study.

Hillary Storm, MSN, RN, interim advanced practice nurse for the main OR at UIHC, and her colleague Kelsey Deeds, MSN, RN, who at the time of the project was a nurse clinical specialist in the main OR, collected data for 1 month before and 7 months after the intervention, using a paper data collection tool. The basis for their project was an increasing rate of SSIs and cellulitis for TAHs. A UIHC study had shown that patients with these conditions were more likely to be readmitted and return to the OR. The task force identified OR traffic as one potential factor, so Storm and Deeds took on door openings as an evidence-based practice endeavor.

### Creating a culture

Both hospitals developed a number of strategies to reduce unnecessary traffic (sidebar, p 11), but it was also necessary to change the culture from one in which OR staff go into and out of ORs without much thought to one in which they consider whether every door opening is truly needed.

Culture change starts with educating vendors, surgeons, and OR, anesthesia, and ancillary staff such as radiology technicians. Shrinski and Esser used a PowerPoint

presentation to drive home key points about standards related to OR traffic and shared research articles about potential problems with the number of door openings, such as the risk for contamination through disruption of the laminar airflow in the OR. “We did small group teach-back sessions on alternative ways to facilitate communication without opening the door,” Esser says. Surgeons also received a flyer about the project.

At UIHC, Storm says, “We presented the evidence behind why we needed to address the problem and what the guidelines would be.” Staff were given the option to participate in the project, and almost everyone did.

“Peer involvement was what really made this successful,” Esser says. “We can do presentations, but what resonated most was having other staff members encourage them to limit unnecessary traffic.” Shrinski adds that he told staff, “We need you to be a change agent for the patient. Are you willing to speak up or at least tell someone [about unnecessary traffic]?” He ensured that staff understood the leadership team would support them.

“The most important thing is to identify champions in the department for the project,” Esser notes. Members of the patient safety committee work in the ORs, so they were active in the implementation.

OR managers must back up the culture with appropriate policies. Shrinski and his colleagues updated the traffic control policy, incorporating AORN standards. The team also participated in writing a policy to encourage scheduling cases that will draw a number of observers into one of the two rooms with access to the observation deck. “All observers must be in the observation deck unless there is a necessity for them to be in the room,” Esser says.

### Raising awareness

Studies such as those done at UIHC and Gillette can go a long way toward enhancing awareness of OR traffic as an issue.

Storm says the difference between the perceived number of times the doors opened and the actual number was eye-opening: “We were coming in and out of doors without being cognizant.” Before the study, half of the staff at UIHC thought the doors opened 11 to 20 times during each TAH case, compared to the reality of 58 times.

She says the study helped staff become “better communicators and better planners” and to identify simple solutions such as putting a specimen by the door for pickup so the door only has to be opened once. Storm also credits the staff’s work with raising awareness of central processing staff and nursing assistants, who do tasks such as obtaining equipment and setting up rooms. “They weren’t aware of what impact opening doors has on patient care,” she says.

Because so many factors influence SSI, it’s difficult to determine the effect reducing door openings had on both hospitals’ infection rates. However, reducing OR traffic is important in an overall plan to reduce SSIs.

### Strategies for reducing OR traffic

OR doors most commonly are opened to get equipment or to transport laboratory tests or specimens, but up to 30% of door openings occur for social reasons. Whatever the reasons your OR doors are opening, consider implementing some of these strategies from the teams at the University of Iowa Hospitals and Clinics in Iowa City and Gillette Children’s Specialty Healthcare in St Paul, Minnesota:

- take breaks between cases or after skin closure
- place specimens by the door
- call staff outside the OR to bring supplies and equipment

once the patient has entered the room

- have OR charge nurses and managers call into the OR for time estimates and other information
- before scrubbing in for lunch or shift relief, call into the OR to verify a break is appropriate
- place signs at key points as reminders to limit OR traffic
- schedule cases likely to draw a high number of observers in a room with an observation deck, if possible
- give Wi-Fi phones to float staff to facilitate communication without entering OR rooms.

That's not to say these types of projects are easy. "We got some push back from anesthesia and surgeons," Storm says. "But we persevered. One surgeon who was skeptical [about the project] now asks if people really need to be in and out of the room." That's a success story that can make any OR manager's day. ❖

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

**Get Your CE Credits!**

Each issue of OR Manager is preapproved for 3.0 nursing contact hours for registered nurses.

To complete an online post-test and earn continuing education (CE) credits, simply login to [www.ormanager.com](http://www.ormanager.com) and go to My Account. Click on "My Courses" and click into the issues.

Need help? Contact [clientservices@accessintel.com](mailto:clientservices@accessintel.com).