Potential process improvements captured through web-based survey

How to identify the most common problems that occur in the OR and then find ways to prevent them is a trick most OR leaders would love to learn. A solution that shows some promise is a web-based debriefing questionnaire, judging by the experience of a multidisciplinary safety team at Northwestern Memorial Hospital (NMH) in Chicago.

The questionnaire helped them capture the 2 most pressing issues—“equipment/physical environment” and “scheduling/coordination”—and develop specific strategies for process improvement, according to Amy Halverson, MD, FACS, associate professor of surgery and chief of colorectal surgery.

Improving communication

Previously Dr Halverson had led a study to evaluate the effect of a team training program on communication in the OR. Surgeons, surgery residents, anesthesia providers, nurses, and other OR personnel attended the program, which was based on principles of crew resource management.

The curriculum included the concept of a preoperative briefing as a tool for improving information flow about key issues related to the patient, equipment, and procedure. A module on communication skills covered techniques for transferring information between team members, such as calling out critical information, and attendees learned a standardized approach for handoff communication.

To determine the effectiveness of the training, observers with experience in quality were stationed in the OR to identify communication problems. Before the program was implemented, 56 errors were observed over 76 hours (a rate of 0.737 errors per hour); afterward, that dropped to 20 errors over 74 hours (a rate of 0.270 errors per hour)—a significant decrease.

The observers reported similar types of communication errors before and after the training program. In both cases, communication errors related to equipment, such as not having requested equipment available, topped the list.

Although the information obtained was helpful, using observers “was very labor intensive and very expensive because they spent 1 to 2 hours in each OR,” says Dr Halverson. “We wanted an alternative to capture what was going on.”

The team then developed a 20-item, web-based questionnaire, which was designed to be completed in less than 5 minutes (see sample survey questions). A link to the anonymous survey was mailed to members of the surgical team after each of 58 colorectal procedures over a 3-month period.

“We went into the rooms to encourage people to complete the survey,” Dr Halverson says. Out of 515 invitations, 145 elicited responses, as follows: 39%, nurses and surgical technicians; 25%, surgeons; 16%, anesthesia providers (attending anesthesiologists, certified registered nurse anesthetists, and residents); 15%, surgical residents; 4%, medical students; 1%, other.

Dr Halverson cautions that a questionnaire identifies some issues more easily than others. For example, she has a theory about why equipment issues topped the list:
“It’s a concrete issue; other communication breakdowns are harder to recognize,” she says. “So equipment issues may be more common, or it might just be [they’re] an easy thing to recognize. It’s easier to wrap your head around somebody not giving you a piece of equipment as opposed to a conversation where you didn’t get something in the patient history you needed.”

Recognizing problems
“Team training is not an inoculation where you get it 1 time and you’re done,” says Dr Halverson. “You need to keep it in the forefront of people’s minds.” By doing so, hospitals can encourage staff and surgeons to better recognize potential problems.

In addition to teaching team training to individuals new to the institution, NMH is exploring ways to provide ongoing reinforcement of the key principles of team training. Dr Halverson notes that it’s also important for clinicians to understand the role perception plays in interactions. “If you don’t know someone that well, you might not encourage questions. You’re not necessarily being rude; you just might not be comfortable with the person,” she says.

“The challenge is how to measure the effectiveness of communication training,” Dr Halverson adds. Part of that measurement is simply observing the culture. Since the implementation of team training, people now introduce themselves—a habit that has become part of the culture at NMH.

Measuring results
The questionnaire is not intended for regular use after each surgical case because of cost and the time needed to complete the survey. However, Dr Halverson says that periodically using the questionnaire is a helpful method for identifying pre- and in-
traoperative issues that cause delays and potential patient safety issues. She notes that the collected data can be used for process improvements and system redesigns.

Dr Halverson adds that hospital leaders might want to use a web-based questionnaire to obtain a baseline before implementing a change. “Then you can measure the effect of the change,” she says.

—Cynthia Saver, MS, RN

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