Patient safety

Adopting a 'no interruption zone' for patient safety

The time-out is called, but conversations are going on, and the staff is still assembling equipment. No one seems to be listening. Then during the case, the anesthesiologist has trouble hearing over the loud music and chatter. The circulating nurse needs confirmation on a specimen but can't get the surgeon's attention.

Distractions and interruptions happen in the OR as often as every 3 minutes, studies show. Do these distractions contribute to errors?

Researchers recently conducted a controlled study to find out. In a lab, 18 surgical residents performed laparoscopic cholecystectomies on a simulator. Each resident performed procedures both with and without distractions and interruptions. Distractions and interruptions were introduced randomly without residents being aware of the study's purpose. In results:

- 8 of 18 (44%) of the participants made major errors when there were distractions and interruptions
- only 1 of 18 (6%) did so when there were none.

No-distraction strategies

Some ORs are taking steps to tame distractions during critical periods of cases. One strategy is the "sterile cockpit" or the "no distraction zone" (NIZ), a term more applicable to health care.

Aviation adopted the sterile cockpit years ago after an analysis of 78 accidents showed 72% were linked to distractions.

"On average, in aviation, there are 7 warning signs before an accident," but distractions can keep a crew from recognizing them, says Steve Harden, an airline captain with LifeWings, who has consulted with hospitals on patient safety for 12 years.

The Federal Aviation Administration now has a rule saying that during critical phases of the flight, such as takeoff and landing, no conversations or paperwork not directly related to the flight operation are allowed. Pilots are suspended for violations.

An NIZ for the OR

As in aviation, an NIZ in the OR is a quiet time during critical phases of a procedure triggered by a word such as "Delta."

For example, an NIZ can be declared during the 3 phases of the World Health Organization (WHO) Surgical Safety Checklist: sign-in (briefing), time-out, and sign-out (debriefing). The trigger word can also be used anytime during a procedure when a team member sees something amiss or requires quiet.

During an NIZ, the team:
- stops all conversation
- stops all unnecessary activity
- turns down any music
- addresses the situation in an engaged way.

Tips: No interruption zone (NIZ)

- Agree on a term for declaring an NIZ, such as "Delta."
- Customize the surgical safety checklist to include Delta.
- Have the surgeon reinforce the use of Delta during the briefing.
- Conduct interdisciplinary teamwork training on use of the NIZ.

"The bottom line is that the NIZ helps you build a wall between your team and distraction-induced errors," Harden says.

NIZ: The prerequisites

An NIZ can't be used in isolation, Harden stresses. To be effective, it must be part of a culture of patient safety and teamwork.

A safety culture accepts that because all procedures are performed by humans, errors will occur, no matter what tools or countermeasures are used. A safety culture is characterized by professional support, mutual respect, cross-checks, and the willingness of all team members to speak up if something seems amiss.

The record on speaking up isn't strong.

Based on results of safety climate surveys analyzed by the Agency for Healthcare Research and Quality in 2011, "we know that if any hierarchy is present in the interaction, over 50% of staff will not speak up," says Harden.

Teamwork training, such as education in crew resource management (CRM) or TeamSTEPPS, an evidence-based teamwork system, helps to lay the groundwork.

In the training, interdisciplinary groups of physicians, nurses, and other personnel learn principles of patient safety, communication, assertiveness, and other methods that create more cohesive units.

"A collegial, interactive team catches and neutralizes mistakes, holds one another accountable, and backs each other up," Harden notes.

At Nebraska Medical Center, for example, before teamwork training, 69% of OR personnel say they would speak up, he says. That rose to 93% afterward.

Design in the buy-in

Safety strategies like the NIZ and surgical safety checklists are most likely to be accepted and used consistently if they are designed or modified by front-line clinicians who will actually use them. The WHO checklist is intended to be modified to fit each organization's needs.

"The key principle is that the people who use a checklist are the ones who design it," Harden says.

"A mistake I see a lot of places make in the way they design or revise their checklists is to have it done by administrators in surgical services."

It's more successful if the checklist is modified by a multidisciplinary work group of nurses, techs, and physicians.

For physicians who sit on the work group, he adds, "You have to be crystal clear that they are representing their peers." The physicians agree that they will convey to their peers how the checklist is to be used.

Introducing the NIZ

Nearly all procedural areas in the 6-hospital Memorial Health System, based in Hollywood, Florida, have adopted the NIZ, triggered by the word "Delta."

"When someone says 'Delta,' it means, 'I have a problem. Stop,'" says Jenny Kadis, MS, RN, CPAN, the system's director of clinical effectiveness.

A safety statement about using Delta is part of the surgical safety checklist.

During the briefing at the beginning of a case, the surgeon reminds the team about Delta by saying something like: "Speak up for safety. Look for red flags. Use Delta any time."

If the surgeon forgets, anyone else on the team can remind the surgeon to make the safety statement.

Delta is also called anytime during a case when a team member spots a problem. Some examples:

• A surgical technologist called a Delta when a piece of equipment wasn't working.

- An anesthesiologist called a Delta when there was a lot of music and chatter, and he needed to hear.
- A labor and delivery nurse called a Delta when a lap sponge was missing while she was counting on a c-section.

First, she said, "A sponge is missing." No one listened. She repeated the statement. Again, no one stopped. "Then she said, 'Delta,' and they all stopped closing and looked up," Kadis recalls. The sponge was found with the placenta in the specimen bucket.

The right word

It took a surprising amount of time to identify the right word for triggering the NIZ. Delta was suggested because of its tie to aviation.

There was considerable discussion about what Delta might mean in different clinical areas. Eventually, consensus developed. Now Kadis says Delta is recognized throughout the Memorial system.

Laying the groundwork

Memorial began building the foundation for a safety culture in 2007 when it introduced CRM.

"That's the key to success, the willingness to fund training," Kadis says. "We brought it in with full support of the executive team." Even in the wake of the nation's economic downturn, Memorial continues to fund a CRM director position.

CRM training is mandatory for all personnel in procedural areas, including physicians, and the requirement is included in the medical staff bylaws. Aides, transporters, and unit secretaries also participate in training.

Physicians must train within 6 months of joining the organization. One cardiologist had his procedural credentials suspended until he completed the training class.

The chief medical officer is a driving force. During the rollout of the CRM training, he and Kadis targeted key physicians, visiting their offices, making phone calls, and following up to enlist champions.

Assertiveness for staff

Having the staff feel comfortable with speaking up is essential for safety, Kadis notes. Memorial's staff receive training in assertiveness.

She's developed real-life scenarios so they can practice. Examples:

- A surgeon preparing to list 15 specimens at the end of a case says, "Listen, because I'm only going to say this once." How do you respond?
- A Delta is declared. A vendor who is in the OR is on the phone and won't get off. How do you handle the situation? (At Memorial, any person present in the OR is considered a team member and is expected to adhere to policies.)

Showing the value

Physicians need to see there is something for them in participating, Kadis adds, saying, "We've worked hard to show value."

One way to show value is to record concerns that arise during debriefings at the end of cases and to act on them.

Circulating nurses fill out a debriefing form. The concerns are categorized, recorded in an Excel spreadsheet, and sent to the OR director, who assigns personnel to address them.

"That person is responsible for giving an update to the physician within 72

hours. They don't have to be solved by then," she notes.

Resolutions are recorded and quantified.

Managers report regularly at the Department of Surgery meeting, saying, for example: "In the past 6 months, we've made 1,100 updates to preference cards. We've examined the lights in Room 10, and they're going to be replaced. We've had the vendor provide additional staff training on the video system."

They also share success stories: "During a briefing, we found out a baby was allergic to a medication, and only the circulating nurse knew."

Turnover time has improved because staff is more prepared for cases.

Business has also improved. After the OR director was able to document 50 delays caused by insufficient instrument sets for lap choles, the administration approved the purchase of additional sets, enabling more cases to be performed.

Kadis says she can't overemphasize the need for team training.

"People think CRM is just about building a time-out process," she says. "But it's not only the time-out; it's speaking up; it's working as a team; it's talking openly.

"There's so much more than just building the tools. Tools are great. But if you just read a poster, and you're not talking to each other, you might as well not bother."❖

—Pat Patterson

A copy of Memorial Health System's surgical safety checklist with the safety statement is in the OR Manager Toolbox at www.ormanager.com.

Steve Harden can be reached at sharden@saferpatients.com. A recording of his OR Manager webinar, Eliminating Distraction-Induced Errors, with further tips, can be purchased at www.ormanager.com.

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