Simulation study supports use of crisis checklists

Surgical checklists have gained traction in recent years as studies have shown that they improve patient safety.

Using surgical crisis checklists might be the next logical step, judging by a recent simulation study. OR staff missed just 6% of life-saving steps when using crisis checklists, but when staff relied on memory alone, 23% of life-saving steps were missed.

A total of 17 OR teams from 2 community hospitals and 1 academic medical center in the Boston area participated in the study, which was done in the simulation lab at Brigham and Women’s Hospital in Boston. Each team had anesthesia staff, OR nurses, surgical technologists, and mock surgeons (because few volunteer surgeons were available for the study).

The teams spent 6 hours in a high-fidelity simulated OR where they handled crises such as air embolism, anaphylaxis, asystolic cardiac arrest, and hemorrhage. For half of the scenarios, they were allowed to use crisis checklists; for the other half, they worked from memory.

Failure to adhere to life-saving processes of care for each crisis was the primary outcome. Checklist use reduced the failure rate by nearly 75%.

“The basic surgical checklist introduced 4 years ago still has not been widely adopted because it’s hard to get staff to agree on how they want to do it,” says Atul A. Gawande, MD, FACS, a general surgeon at Brigham and one of the study’s authors.

“To have a verbal plan—a scripted check-in/check-out—takes agreement, and that has been hampered by skepticism, especially among surgeons. The fundamental value in our system is autonomy; people value independence, whereas this system demands humility, teamwork, and discipline.”

But the results of this study argue for making the effort. Fully 97% of the study participants said that if an emergency occurred while they were having surgery, they would want the OR team to use a crisis checklist. Participants also said the crisis checklist was easy to use, and it made them feel better prepared.

Guides for staff

At Brigham, booklets containing crisis checklists have been placed on the anesthesia cart and on the wall near the circulating nurse to guide staff step by step through potential intraoperative emergencies.

Whole-team simulation training and crisis management have been introduced at Brigham and at Harvard, and surveys will be done to see if these checklists have been useful in disasters.

“The key part is getting people together and getting them to agree on the content of the booklets,” says Dr Gawande. He noted that booklets from a pilot project 2 years ago were updated to reflect current clinical guidelines and suggestions from staff at Brigham.
For successful checklist adoption, it’s important to train teams individually, especially the anesthesia and nursing staffs, he advises. Details about Brigham’s experience and guidelines for implementation at other institutions are available at www.projectcheck.org/CRISIS.

**Reference**  