Workflow support in new Johns Hopkins ORs

Staff in the cardiovascular OR area of the new Sheikh Zayed clinical tower at the Johns Hopkins Hospital in Baltimore will be able to locate certain equipment via computer and use a Skype-like camera system to share images of instruments and supplies with the sterile core and sterile processing unit.

Those are some of the technologies to aid workflow and communication for surgery at the new hospital, which opened May 1, 2012. The facility has two 12-story towers on an 8-story base with 560 private patient rooms and 33 ORs.

The Johns Hopkins Heart and Vascular Institute combines cardiac, vascular, and cardiac interventional services on one floor of the new building. The institute has 6 cardiovascular ORs, 2 hybrid rooms, 5 cath labs, and 4 electrophysiology labs in addition to the cardiac care units and ICUs. A common preop and recovery unit serves the new ORs and interventional rooms.

The OR nurse manager, Patti Wieczorek, MSN, RN, CNOR, described for OR Manager the technologies that will aid the institute’s workflow and logistics.

Real-time locating system
A real-time locating system (RTLS) with radiofrequency and infrared technology can track equipment through the facility. In the ORs, specific equipment, such as pacemakers and equipment needed in emergencies, will be designated for tracking.

It will be a change for the staff to be able to look up equipment in the computer rather than going to hunt for it, she notes. The system will be tested in the new building to be sure there are not dead zones, which turned up during a trial in the old facility, she adds.

Some OR staff, such as transporters, will wear RTLS locator tags. With the tags, they can be contacted in case there is a change of plans, such as the need to pick up a different patient.

In-house mobile phones
Instead of overhead paging, staff and physicians can call and text using an in-house wireless mobile phone system (Ascom, www.ascom.com).
On the inpatient units, patients and families will be able to call their assigned nurse directly. The phones cannot be used to call outside the system.

In the ORs, overhead paging is reserved for emergencies, such as a cardiac arrest, when a number of personnel must be summoned quickly.

**Room-monitoring camera**
A static camera in each OR allows coordinators at the control desk to check on the progress of cases. At the end of a case, they can deploy staff to aid turnover. In an emergency, they can quickly see what rooms are available.

**Visual displays**
Time stamps in the electronic documentation system allow the staff to key in time segments, such as patient in OR and case end, driving a visual display of case status throughout the department. In the waiting room, families will receive a code that allows them to monitor the status of their loved one’s surgery via a color-coded bar on a screen.

**What’s that instrument?**
A web-cam type system will enable the OR, sterile core, and sterile processing department to exchange images of instruments and supplies. That will aid communication among these staffs, which often use different terms for the same item.

“It’s like Skype. We can talk to the supply room and show them what we need. They can pull up the picture on their computer,” Wieczorek says.

**Supply delivery**
The new hospital’s supply delivery system combines a decades-old technology, a chain-driven tow line, with a newer one, radiofrequency ID, for transporting supplies from the loading dock 1/4 mile from the hospital.

The system uses a tow line buried in the floor. Instead of a person pushing or driving a supply cart, carts are placed on the tow line, and an RFID tag registers where the carts are dropped off. From there, staff take them to elevators and deliver them to the units. Laundry and trash can also be transported via the tow line.

“The chain-drive technology is decades old and was chosen for its simplicity and reliability. The new twist is the radiofrequency ID system,” says Michael Iati, senior director for architecture and planning at Johns Hopkins.

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Have a question on the OR revenue cycle?

Keith Siddel will respond to questions in the column. Send your questions to editor@ormanager.com

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