Web tools a link for periop info systems

Working from home, an anesthesiologist at Duke University Medical Center (with the proper authorization) pulls up the next day’s surgical schedule. On the schedule, she clicks a patient’s ID number to view the preoperative assessment. She can also access a past anesthesia record.

The next day, a nurse reviews the patient’s preop checklist. As she checks off each item, an icon turns from red to green on big screens located throughout the surgical department. All preop icons must be green before the patient goes to the OR. For a high-risk patient, like one with latex allergy, an alert flashes on the big screens.

At the OR control desk, big screens show the status of patients in all of Duke’s 45 ORs.

Nurses in the postanesthesia care unit (PACU) are also monitoring the cases on big screens. Later, a nurse consults the screens to find a patient a bed.

Forty-eight hours later, as the physician sees the patient for a postop assessment, he enters his notes in his handheld computer, and the data goes into the patient database.

They’re all using ORView, an integrated perioperative information system developed at Duke using web-based tools. The system, which recently won an international award, weaves together real-time data from 15 to 20 different systems, yet looks and works like a single system.

The original idea was to make information available through the web so anesthesiologists could look up cases and the OR schedule at home, says the system’s inventor, Iain Sanderson, MD, an anesthesiologist and associate chief information officer at Duke.
“What it became is an integrated system,” he says. Intraoperative nursing documentation is not part of the system yet but will soon be, he says.

Duke developed ORView after trying an integrated perioperative system from a commercial vendor but finding it didn’t work as expected. “This approach allows us to continue with the best-of-breed systems but still tie it together,” says Dr Sanderson, who is considering developing a business plan for the system. He says vendors such as IBM have shown interest.

In June, ORView won for Duke ComputerWorld’s 21st Century Achievement Award for Medicine (www.cwhon-ors.org). The international award recognizes those who have used information technology to benefit society.

**How feasible?**

How feasible is such a system for a smaller hospital? Though Duke is large, ORView was developed by a 5-person team, says Asif Ahmad, a Duke vice president and the chief information officer.

He estimates the cost of maintaining ORView will be $250,000 a year, “pocket change, compared to the cost of an EMR [electronic medical record] system.”

Ahmad finds it surprising that perioperative information systems don’t get more attention from CIOs, considering that surgery accounts for 25% to 50% of a hospital’s revenue and is one of the places where patients are most vulnerable. “Hopefully, this award will raise awareness of the need and what can be done,” he says.