

Emergency makeover: 'OR of the Future' set to go live at Mass General

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The future is about to arrive for the "operating room of the future."

Officials involved with a data-integration system at Massachusetts General Hospital say they will launch the project called the Operating Room of the Future on patients next month.

The debut will mark the beginning of a novel approach to providing doctors, nurses and support staff with an updated stream of information about the inert hulk upon which they will be practicing their craft.

"The hardware is in place and the live feeds of data are ready to go," said Jeffrey Robbins, chief executive officer of LiveData Inc., a Cambridge tech company that helped design the system.

"Mass General will make the final decision on the exact date, but patients can't afford to wait for technology like this that brings all their data together."

The technology that doctors will access is focused on integrating physiological data about the patient that surgeons once received with clipboards — if at all.

A 42-inch screen visible to all in the operating team will be hooked into databases that pull up info on the patient and the procedure. If she is allergic to latex or if she has a history of low blood pressure, these conditions will be made known on the visual display. Nurses as well as physicians will be accessing data from the system, designers say.

The OR of the Future is a cooperative project linking several organizations. MGH is a key player in rolling out the technology. The medical center conducts the largest hospital-based research program

in the United States, with an annual research budget of more than \$450 million, hospital officials say.

Driving the adaptation of the technology has been the Center for Integration of Medicine and Innovative Technology (CIMIT). CIMIT, composed of medical professionals from MIT, Charles Stark Draper Laboratory and the Harvard University teaching hospitals, is a Cambridge organization focused on melding technology and medicine.

CIMIT officials say the OR of the Future will be one of the first in the country to use this type of data integration in the operating theater.

"The Operating Room of the Future has been one of CIMIT's hallmark collaborative programs with industry," said Dr. John Parrish, director and co-founder of CIMIT and a physician at MGH.

"Using state-of-the-art technology, we are delivering better, safer, more cost-effective care to our patients."

LiveData is also helping to deploy the integration technology. The company recently won a Phase II Small Business Innovation Research grant of \$800,000 to continue its work in the integration of medical data. (The grant came through the U.S. Army Medical Research and Materiel Command, through its Telemedicine and Technology Research Center.)

Also involved in the deployment has been Aptima Inc., a Woburn integration team that helped design the real-time display of "human information" created to help each member in the OR.

One of the grim statistics that efforts such as this is trying to reduce is the number of unexpected deaths in medical centers. Industry statistics show that in 2003, close to 98,000 patients died of "accidental" causes in U.S. hospitals.



STUART GARFIELD PHOTO

Dr. Warren Sandberg, sitting, of Massachusetts General Hospital, and Jeffrey Robbins, CEO of LiveData Inc., are key members of a team that has developed the Operating Room of the Future.