

LiveData: US Army Award to Enhance Patient Safety at MGH/CIMIT Operating Room of the Future

BOSTON, CAMBRIDGE--(BUSINESS WIRE)--Aug. 11, 2005
Aspiring to create a patient zone of safety within the operating room, LiveData, Inc., a leading innovator of real-time data management solutions, received a Phase II Small Business Innovation Research (SBIR) grant from The United States Army Medical Research and Materiel Command. The LiveData team will be working with the Massachusetts General Hospital (MGH) and CIMIT Operating Room of the Future (ORF).

This grant follows the Phase I SBIR grant issued in December 2003, in which LiveData, working with CIMIT and MGH clinicians, paved the way for significant improvements in patient safety through an integrated information system in the OR. The Phase II grant will enable LiveData to design a state-of-the-art system - LiveData Patient Knowledge System (PKS) - for the MGH/CIMIT Operating Room of the Future.

"This is the first example of cross-system data integration that the ORF patient zone of safety needs in order to fulfill our vision -- enhancing patient safety while at the same time giving OR personnel the tools they need to focus more intensely on direct patient care," noted Warren Sandberg, M.D., PhD, Co-Program Leader of the MGH/CIMIT ORF.

Principal Investigator on the project, Dr. Sandberg added: "Safety depends on having complete, integrated patient data. Although data integration from disparate sources is something that clinicians do all of the time, the time scale in the OR can be very compressed. Therefore, integrating big parts of the continuous data stream and making it visible on a single display for everyone to see and use is a holy grail of the OR of the Future. Once the data are collected in a single place, it enhances decision support and information clarity, and we believe the patient will benefit."

Bringing Together Novel Technologies

One of the goals of the ORF is to bring together novel technologies in a live surgical environment and measure the impact on patient care, cost and efficiency. LiveData and MGH have agreed to go beyond the design stage, and implement a fully working system in the ORF.

"Full implementation of LiveData PKS in the ORF will dramatically improve our ability to test and document the system's impact on patient safety and overall quality of care," said Philip Brzezinski, Vice President of Healthcare Systems at LiveData.

LiveData PKS is expected to deliver tremendous value to clinicians striving to improve patient care and safety. The system will capture key information about the patient from diverse hospital information systems and OR systems, including physiological monitors, for presentation on a large, flat panel display, visible from anywhere in the OR. It will also archive information for subsequent retrieval and analysis. The OR display will be context sensitive, showing key patient information as the patient moves from pre-operative preparation to intraoperative, closing and post-operative care.

Clinical Impact

Marie Egan, RN, MS, Technology Staff Specialist and Project Manager for the MGH Operating Room of the Future, explained. "Operating rooms are busy, dynamic environments, with the potential for different staff to be present at different times in a case. A staff member entering the ORF will be able to see, at a glance, all the pertinent data relevant to that patient, and the progress of the case. We believe that this enhanced situational awareness will provide staff with a higher level of readiness to prevent potential errors before they happen."

"For example," Ms. Egan continued, "before the operation begins, we will be able to conduct a 'team time-out,' as the PKS displays critical information about the patient and upcoming events. During the operation, everyone in the room will be able to see, at a glance, what procedures have been done, how the patient is doing, and who is in the room. This will help keep the entire team on the same page and improve communication among team members. Before we finish, our large display will highlight safety checks as they are completed. We can see many, many opportunities where improved communication can reduce if not eliminate the potential for error."

LiveData Teaming with Aptima

LiveData is teaming with Aptima, Inc., experts in human factors analysis and design, and MGH clinicians to assess the OR work flow and design the context-sensitive information displays. The result will be a smoothly flowing, real-time display of patient information that is relevant to the entire team.

"Clinicians need to be able to instantly understand patient information at a glance," said Daniel Serfaty, Founder and CEO of Aptima. "Aptima and LiveData are working together to make this happen in the Operating Room of the Future, by understanding how clinicians work and interact in the OR, and utilizing human factors expertise to design the way information is presented. The result, we believe, will be a very significant improvement in team communication, patient safety and the quality of care."

Aptima is dedicated to providing human-centered technology solutions to industry and government customers. Founded in 1995, Aptima applies advanced human factors principles, cognitive technologies, user-centered design, and engineering expertise to enhance the effectiveness of collaborations. For more information please visit www.aptima.com.

LiveData Potential to Impact Patient Care

Jeffrey Robbins, LiveData's founder and CEO, expressed his appreciation to CIMIT and to the US Army for their continued support. "We were very pleased to win the Phase I award, but the Phase II award is especially significant. This says to us that the US Army, through its Telemedicine and Technology Research Center, sees very real potential for LiveData to positively impact patient safety in the OR." (continued on page 2, column 1)

LiveData, Inc. is the leading innovator of smart integration technology. LiveData solutions continuously monitor, synthesize and respond to highly complex, multi-faceted processes in real time, spanning a broad mix of distributed devices, diverse vendors' systems, protocols and databases. Founded in 1991, LiveData serves customers in healthcare, electric power and utilities, and manufacturing industries, as well as state and local governments. For more information please visit www.livedata.com.

The CIMIT Model

CIMIT brings together clinicians and engineers to improve health care. A consortium with MGH and the Harvard teaching hospitals with scientists and engineers from Massachusetts Institute of Technology, and Charles Stark Draper Laboratory, the CIMIT model fuses technology and medicine to accelerate investigator ideas into medical practice. Using novel technologies from minimally invasive diagnosis and therapy to medical education simulation, CIMIT teams are dramatically changing patient care. Further information is available at www.cimit.org.

About Massachusetts General Hospital

Massachusetts General Hospital, established in 1811, is the original and largest teaching hospital of Harvard Medical School. MGH conducts the largest hospital-based research program in the United States, with an annual research budget of more than \$450 million and major research centers in AIDS, cardiovascular research, cancer, cutaneous biology, medical imaging, neurodegenerative disorders, transplantation biology and photomedicine. In 1994, MGH and Brigham and Women's Hospital joined to form Partners HealthCare System, an integrated health care delivery system comprising the two academic medical centers, specialty and community hospitals, a network of physician groups, and nonacute and home health services.

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