

RFID System Helps Houston VA Hospital Maintain Patient Safety

Patients at risk of falling or wandering off will wear wristbands with active RFID tags, allowing staff members to monitor their locations at all times.

By Beth Bacheldor

Oct. 17, 2006—The Michael E. DeBakey Veteran Affairs Medical Center (MEDVAMC) is implementing an RFID-based system created to help protect and care for patients at the Houston veterans' hospital. RF Technologies' Safe Place system is designed to support the hospital's "Code Purple" initiative, which identifies patients at risk of falling, wandering off or otherwise endangering themselves, and outlines processes for handling their care.

The hospital serves as the primary health-care provider for more than 112,000 veterans in southeast Texas. The Safe Place system includes purple patient wristbands with active RFID tags embedded in them, RFID interrogators, Windows XP-based software and 17-inch wall-mountable touch-screen computers. It also incorporates RF Technologies' Sensatec solution, consisting of an RFID-enabled sensor pad for patients to lie on.

Caregivers will be able to utilize the system to locate a patient within a room, or to alert other hospital staffers if they themselves require assistance. In addition, the hospital plans to use the active RFID tags, which operate at dual frequencies of 262 MHz and 381 MHz, to track medical devices and other assets.

MEDVAMC "has had a very strong history of being aware of patient safety," says Jack Marshall, director of health-care enterprise solutions at RF Technologies in Brookfield, Wisc. The hospital's Code Purple program has proven so successful, Marshall says, that other VA hospitals are implementing it as well. The Safe Place and Sensatec implementations are taking the initiative a step further, he says. MEDVAMC began the RFID implementation at the end of August and currently has 150 patient wristbands for use in the emergency room, as well as the mental-health and transitional-care units. Hospital staff members are presently being trained, Marshall says, with the system expected to go live this month.

The tags within the wristbands emit signals every 10 seconds to nearby RFID interrogators, which ascertain the tags' unique ID numbers and relay that information to the Safe Place software. Nurses and other caregivers can check computers running Safe Place at each of the main staffing centers, as well as on remote LED indicators in the hallways, to confirm a patient's location in the room. With the LED indicators, which hang from the ceiling, the nurses can check a patient's location status by merely by looking at the LEDs, instead of seeking out a centrally located computer. If a patient at risk of wandering off attempts to move out of the room, RFID antennas installed in doorways register such movement via the RFID wristbands and alert the software, flashing alarms on the LED monitors and sounding alarms throughout the unit. Additionally, the system causes the door to lock. The sensor pads work separately from the wristbands; if a patient tries to get out of bed, the pad senses the weight shift, and that information is relayed to the RFID interrogator and on to the software, allowing hospital staff to attend to the patient.

Nurses and other caregivers working in the three units are being issued RFID-enabled pendants they can wear either around their necks or clipped to belts. When a nurse presses a pendant's button, it communicates with the RFID interrogators to sound an alarm and signal where they are—for example, in the event that the nurse needs help restraining a patient.

RF Technologies initially developed its Safe Place RFID-enabled solutions to ensure the safety of babies and children in hospitals. In addition to health-care applications, the company is expanding its product line for other uses, as well. Recently, the firm announced an active RFID system called Seeker, which finds assets via a handheld interrogator. The Seeker looks for specific tags attached to equipment and lets users know, through a visual indicator on the handheld, when they are getting closer or farther away from a desired item (see [RFID Platform Plays Marco Polo to Find Assets](#)).

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